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The University of Southern Mississippi

GENERALIZATION AND MAINTENANCE OF
HIGH SCHOOL TEACHERS' USE OF BEHAVIOR SPECIFIC PRAISE
FOLLOWING DIRECT BEHAVIORAL CONSULTATION IN CLASSROOMS

By

Traci Ann Taber

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

August 2015

ABSTRACT

GENERALIZATION AND MAINTENANCE OF

HIGH SCHOOL TEACHERS' USE OF BEHAVIOR SPECIFIC PRAISE

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by Traci Ann Taber

August 2015

This study tested the efficacy of *in situ* direct training on increasing high school teachers' use of behavior specific praise in the classroom. Of further interest was the extent to which training led to teachers' maintained praise and generalized praise use in untrained classes. Students' disruptive behaviors were measured concurrently to test the relationship between increased praise use and decreases in students' inappropriate behavior in the classroom. Increasing the frequency of teachers' use of praise statements with students for engaging in appropriate behavior has shown subsequent reduction in the occurrence of classroom disruptions resulting in less time that a teacher spends addressing inappropriate behaviors. Ultimately, this results in more time available for instruction and feedback to students. The current study found that use of *in situ* direct training resulted in an increase in high school teachers' use of BSP in the classroom where the training occurred. Three of the four participants required one brief performance feedback session to maintain a substantial increase in BSP over baseline rates, but all participants ultimately maintained a rich rate of BSP in the class where training occurred. Additionally, generalization of increased use of BSP was evident, although three of the four participants required a simple generalization prompt to bring about this end. Student level of disruptive behavior decreased as a result of the increase

in BSP. Results from this study are discussed in terms of the consultation literature and implications for applied practice.

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A Dissertation

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of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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CHAPTER I

INTRODUCTION

Statement of the Problem

Disruptive behavior is an ever-increasing issue in public schools. Teachers report that inappropriate behavior is becoming more prevalent and is a threat to effective teaching and learning (Skiba & Peterson, 2000). According to Walker, Ramsey, and Gresham (2005), instructional activities in schools are regularly interrupted by problem behavior, such as harassment, aggression, social withdrawal, and insubordination. Teachers consistently report concerns regarding their ability to effectively manage classroom behavior. Across several studies, teachers have reported classroom behavior management as their greatest need for training and support (Kratochwill, 2012; Reinke, Stormont, Herman, Puri, & Goel, 2011). With regard to classroom behavior management, teachers report their areas of most significant need to be preventing discipline problems in the classroom and addressing behavior problems as they occur (Crone, Horner, & Hawken, 2004). Without an effective classroom management plan in place, teachers are less likely to effectively instruct students and must rely on the school's discipline plan to address problem behavior in the classroom.

When teachers rely on their school's discipline plan to respond to students' disruptive behavior, they commonly use punitive techniques such as exclusion (e.g., suspensions; Sprick, Borgmeier, & Nolet, 2002), yet these techniques have been demonstrated to be ineffective in changing students' behavior in a meaningful and lasting way (Costenbader & Markson, 1998). Costenbader and Markson found that more than 50% of students that had been suspended reported they were angry with the person who

had made the discipline referral and were happy to get out of class. Fewer than 20% of suspended students reported feeling sorry for their actions or embarrassed. In addition, one-third of students that had been suspended reported that they believed they were likely to be suspended again in the future. Additionally, use of exclusionary techniques is more likely to result in higher dropout rates than improved school outcomes (Sprick et al., 2002), with a high school completion rate of 50% for students that have been suspended, as compared to 72% for all students (Costenbender & Markson, 1998).

The educational cost of increasing behavior problems in schools includes not only lost instructional time, but teacher attrition as well. The increasing amount of time teachers are spending on managing students' inappropriate behaviors directly results in less time spent teaching and engaging students in academic tasks (Matheson & Shriver, 2005); and more and more teachers are leaving the field out of frustration due to addressing behavior issues in the classroom. Teacher attrition is on the rise, with up to 33.5% of teachers leaving the field of education within their first three years of teaching (Marvel, Lyter, Peltola, Strizek, & Morton, 2006). Classroom management is cited as one of the most prevalent causes of job burnout and teacher attrition (Kratochwill, 2012). Turnover leads to instability, which affects children's ability to succeed academically and socially (Billingsley, 2004). Ronfeldt, Lankford, Loeb, and Wykoff (2011) reported that as teacher turnover increased by one standard deviation, a corresponding decrease in math performance of 2% of a standard deviation was evident. Students in grade levels with turnover rates approaching 100% were particularly affected, with test scores decreasing by 6 to 10% of a standard deviation, depending on the content area of the assessment. Given the economic costs and negative student outcomes associated with

failure to effectively manage students' classroom behavior, there is a clear need for positive and proactive approaches to managing students' classroom behavior.

Positive Behavioral Interventions and Supports

Positive Behavioral Interventions and Supports (PBIS) was developed in response to the need for school-wide discipline systems that focus on the prevention of problem behavior, while providing evidence-based procedures for reducing problem behaviors of students already presenting with behavioral difficulties (Sugai & Horner, 1999). School-wide PBIS is a term that refers to the use of reinforcement-based interventions and supports to achieve behavior change that is socially significant; PBIS involves universal screening for emotional and behavioral disorders, tiered interventions (i.e., universal, targeted, tertiary), and data-based decision-making (Sugai & Horner, 1999).

PBIS has been demonstrated as a promising approach to establishing school environments that address problem behavior in a positive and preventative manner, as the emphasis is on the application of evidence-based behavioral technologies as they are applied to the individual, the classroom, the school, and the district. PBIS uses three levels, or tiers, of assessment and intervention to accomplish meaningful outcomes for each student, with the prevention of problem behavior using antecedent-based interventions being an important component (Sugai & Horner, 2006). PBIS promotes using procedures based on positive reinforcement (Horner et al., 1990), which occurs when a behavior is followed by the presentation of a stimulus that increases the future probability of that behavior under similar circumstances (Cooper, Heron, & Heward, 2007). One simple, yet effective method of positive reinforcement is teachers' delivery of behavior specific praise (BSP) following students' display of appropriate behavior

(Musti-Rao & Haydon, 2011). Moreover, BSP, or regular acknowledgement of students' appropriate behavior, is a core feature of PBIS' Tier I universal supports (Tillery, Varjas, Meyers, & Collins, 2010). Despite the documented benefits of teachers' use of BSP and it being a cornerstone of Tier I PBIS, research indicates that BSP is not regularly used by teachers across grade levels (Reinke, Herman, & Stormont, 2013; White, 1975). White observed the natural rates of teacher approval, defined as verbal praise or encouragement, and disapproval, defined as verbal criticism, reproach, or any statement indicating the student's behavior should change, in classrooms for grades 1 through grade 12. Findings indicated that the rates of verbal approval delivered by teachers decreased across grade levels, with a noted decline after second grade. Also noted were rates of verbal disapproval that were higher than rates of approval delivered in grades 3 through 12. Rates of approval at the high school level ranged from .06 to .21 per minute, or between 3 and 12 demonstrations of approval per hour. A meta-analysis conducted by Beaman and Wheldall (2000) found that high school teachers have been observed to naturalistically deliver BSP at a rate of .02 praise statements per minute, or one BSP statement delivered every 50 minutes. BSP has been clearly found to be effective in reducing disruptive behavior and increasing appropriately engaged behavior for high school students (Blaze, Olmi, Mercer, Dufrene, & Tingstrom, in press). A method is clearly needed to effectively increase the rate with which high school teachers deliver BSP in the classroom.

Behavioral Consultation

Behavioral consultation is one procedure that can be used to increase the probability that teachers engage in simple evidence-based techniques that effectively

manage student behavior. Behavioral consultation (BC) was initially described by Bergan (1977), with later elaboration by Kratochwill and Bergan (1990). BC is an indirect service model and involves four-steps of problem-solving: a) problem identification, b) problem analysis, c) treatment implementation, and d) treatment evaluation. Problem identification involves defining the problem behavior, gathering data and other pertinent information about the problem behavior, and establishing goals. This is often accomplished through the use of interviews. Problem analysis includes examining the environmental factors that are related to the problem behavior, which may be a barrier to progressing toward the goal set during problem identification. This step typically involves the use of an objective measure such as direct observation of a student's behavior in the classroom. Treatment implementation typically begins with training the teacher on the appropriate use of the treatment that has been decided upon. During treatment implementation, the integrity of implementation as well as the effect of the treatment is monitored by collecting data. The final step in the problem-solving process, treatment evaluation, involves determining when the goal of the consultative process has been reached. That is, when the problem behavior has been ameliorated as outlined by the goal set during the problem identification step.

Empirical evidence for both the effectiveness of BC in schools (Busse, Kratochwill, & Elliott, 1999) and the preference for the model among school psychologists (Gutkin & Curtis, 1999) is available. In a meta-analysis conducted by Busse et al. (1999), interventions that resulted from a BC process were effective in reducing aggressive behavior, increasing on-task behavior, increasing work completion, and improving compliance in the classroom. However, BC is not without limitations; Witt, Noell,

LaFleur, and Mortenson (1997) indicated that BC relies too heavily on the verbal interactions of consultation, with insufficient use of guided practice and performance feedback.

Direct Behavioral Consultation (DBC; Watson & Robinson, 1996; Watson & Sterling-Turner, 2008) was developed to address some of the limitations of BC. DBC is similar to BC in that it relies on the same four-step problem-solving model. However, the primary difference between BC and DBC is that DBC includes consultation practices such as assessment and teacher training conducted in the classroom during on-going instructional activities. Moreover, DBC places a greater focus on doing, or practicing implementation, as opposed to talking about doing.

For both BC and DBC, the two primary consultation activities for increasing the probability that teachers implement interventions with integrity include direct training and performance feedback. Direct training has been shown to be more beneficial, in terms of increased treatment integrity, relative to indirect training (Sterling-Turner, Watson, & Moore, 2002). Additionally, performance feedback, which includes providing teachers with information about their implementation as well as a rationale for improving implementation, has been shown to effectively increase teachers' treatment integrity. The following review of the literature will focus on the BC and DBC, performance feedback, and training literatures, particularly as they relate to increasing the extent to which teachers use praise in the classroom.

Review of the Literature

Performance Feedback

Classroom management is an important component of teaching, as it is directly relates to student involvement in learning and academic achievement. Teachers express a need for more training and support in utilizing effective classroom management techniques (Kratochwill, 2012). Decreasing disruptive behavior and increasing student academic engagement is dependent upon the use of effective classroom management (Matheson & Shriver, 2005). According to Reinke, Lewis-Palmer, and Merrell (2008), many simple, yet effective, classroom management strategies are supported by empirical evidence, including having explicit expectations for student behavior, use of BSP, and consistently providing consequences. Classrooms that include clear expectations, routine BSP, and consistent consequences display increased student academic engagement and reductions in disruptive behavior (Horner, Sugai, Todd, & Lewis-Palmer, 2005). However, there is an ongoing need for effective methods to encourage teachers to employ these strategies.

Performance feedback (PF) refers to actions taken by an agent that provide information regarding some aspect(s) of an individual's task performance (Kluger & DeNisi, 1996). The intent of PF is to improve the target behaviors measured by the observer or performance analyst (Cavanaugh, 2013). PF has been used to encourage teachers to employ effective instructional strategies (L'Allier, Elish-Piper, & Bean, 2010; National Council of Teachers of Mathematics, 2009), and behavior management techniques (Coddington, Feinberg, Dunn, & Pace, 2005). Within a PBIS model, PF has been

suggested as a component of coaching to help teachers improve their classroom management skills (Sprick et al., 2002).

Performance feedback has been extensively examined as a consultative technique to encourage teachers to maintain treatment integrity after a training procedure. Noell, Witt, Gilbertson, Ranier, and Freeland (1997), found that the integrity of teachers' implementation of a prescribed intervention began to deteriorate two to four days after consultation. The participants for this study were three elementary school teachers and students; the teachers sought consultative services for help with the identified student's behavior. The teachers were initially trained using a consultative procedure where the recommended reinforcement-based intervention was described and a rationale for its use was provided. The teacher then implemented the intervention, and had no further contact with the consultant during this phase. All three teachers initially implemented the intervention with 100% of the treatment steps completed and maintained this level of integrity for two to four days. When the level of treatment integrity demonstrated by the teacher was low and stable or trending downward, a PF procedure was implemented. The PF procedure involved the consultant meeting with the teacher for three to five minutes before school began for the day. During this time, graphed data indicating the student's academic performance and the teacher's intervention implementation were reviewed. Following the PF procedure, all three teachers demonstrated increased treatment integrity. The addition of daily PF that included a graph of both teacher performance and student behavior resulted in sustained high levels of implementation integrity.

A subsequent study conducted by Noell et al. (2000) found that teacher training and a follow-up meeting were insufficient to produce consistent and accurate

implementation of a reading intervention, but that the addition of daily PF that included graphed information regarding both the teacher's and students' performance improved the level and consistency of treatment integrity. The participants for the study were five elementary school teacher-student dyads who had been referred for consultative services due to concern for students' poor reading skills, although it was determined in the initial consultative interview that all students also demonstrated problem behavior severe enough to warrant individualized intervention. The recommended intervention was a peer tutoring procedure that required the teacher to provide materials, support, and feedback to the students. The teachers were initially trained by consultants to complete the procedure with 100% integrity. During the implementation phase following training, the integrity of implementation declined. When integrity data were low and stable or trending downward, follow-up meetings were held in which the consultants talked with the teachers about the intervention. No data was provided to the teacher regarding her performance. During the follow-up meeting phase, the integrity of implementation improved for two of the five participants. PF was then conducted in which the consultant met with the participant for three to five minutes before school and reviewed graphed data of both the teacher's performance with the intervention and the student's outcomes. Graphed PF resulted in high levels of implementation integrity for four of the five participants. For the fifth participant, an additional follow-up consultation meeting was held discussing an upcoming conference where the results of the intervention were to be discussed. The teacher was reminded that it would be difficult to evaluate the effectiveness of the intervention if it had not been implemented with integrity, and was offered the opportunity to terminate the intervention early. This meeting resulted in high

levels of implementation integrity. For all participants, the PF was faded to every other day as the teacher demonstrated consistent implementation of the intervention with a high level of integrity.

Noell, Duhon, Gatti, and Connell (2002) found that high, stable implementation of behavior management interventions was achieved only after graphed PF was provided to the teacher participants. The participants for this study were four elementary school teachers and eight of their students. All participants were initially trained to implement a self-monitoring intervention with their students with 100% integrity, with permanent products being used to measure level of implementation. Teachers were then expected to implement the intervention with no contact from the consultant. When implementation integrity was low and stable or trending downward, a data review meeting was held in which the consultant met with the teacher for three to five minutes before school each day to review the behavior monitoring record from the previous day. Plan implementation was discussed and the teacher was given an opportunity to ask questions. If the intervention was not being implemented as planned, the teacher and consultant problem-solved for plan implementation for the current day. If a participant demonstrated sustained, accurate implementation during the data review meeting phase, the meetings were faded to every other day. PF was provided to teachers who did not reach a high, stable level of implementation integrity during the data review meetings. The PF was a modification of the data review meeting in which the previous day's behavior monitoring sheet was replaced with graphed PF of the teacher's implementation of the intervention steps. The consultant identified any steps the teacher had missed or had difficulty completing correctly and a plan for improving implementation that day was

discussed. When a participant implemented the intervention with 100% integrity for four consecutive days, the PF meetings were faded to every other day. After an additional four consecutive days of 100% implementation integrity, the PF meetings were faded to every three days. Results indicated that the data review meeting was sufficient to reach a high, stable level of implementation integrity for one participant. Three participants required the addition of graphed PF to reach consistently high levels of implementation integrity.

According to Noell et al. (2005), PF, when compared to brief weekly interviews and weekly interviews combined with an emphasis on the commitment to implement the treatment, was found to have a better effect on treatment implementation. The participants for this study were 45 student-teacher dyads. Participants were identified when the teachers sought consultative support for a student experiencing an academic or behavioral difficulty. Individual plans were developed for each student and plan implementation was measured using permanent products. Teachers were initially trained to implement the intervention through a meeting with the consultant to review the steps of the intervention, followed by the consultant observing the teacher implement the intervention and providing feedback. The teacher then implemented the intervention for three weeks. Participants were randomly assigned to one of three follow-up conditions. The weekly follow-up condition consisted of a weekly meeting between the consultant and teacher that served as a Plan Evaluation Interview (PEI). The consultant asked about the extent to which the plan was being implemented, how well the student was improving, and if the teacher had any questions or concerns. Intervention materials were not reviewed unless the teacher asked that the consultant look at them, and no treatment

integrity information was shared with the teacher. The commitment emphasis condition included all of the components of the weekly follow-up condition, with the addition of a social influence procedure that was included in the final meeting prior to intervention implementation. The social influence procedure involved reviewing five specific points: (a) people frequently make commitments to behavior change but fail to follow through due to other demands on their time, (b) the importance of the intervention plan as a commitment to the student and/or his parents, (c) the possible harm of not following through with the plan and the potential loss of credibility that would accompany failure to keep the commitment, (d) the importance of implementing the plan to evaluate its effectiveness and keep the commitment to the student, and (e) proactive steps the teacher could use to support plan implementation, such as goal setting, self-monitoring, and self-rewards for implementation. The PF condition involved the consultant meeting briefly with the teacher, reviewing the intervention permanent products, graphing student behavior, and graphing intervention implementation. The consultant also provided positive feedback to the teacher for steps completed, and identified any steps omitted or implemented incorrectly. The consultant and teacher then problem-solved and discussed the importance of any missed steps. PF was conducted following the first day of implementation and every day thereafter until the teacher implemented the intervention with 100% integrity. PF was then conducted every other day until the teacher implemented the intervention with 100% integrity for 2 consecutive days. PF was then conducted weekly. An analysis of variance (ANOVA) was conducted examining effects for time, condition, and the interaction of time and condition. PF differed from weekly follow-up and commitment emphasis, which were not statistically significantly different

from one another. PF was associated with substantially higher levels of treatment integrity than the other two conditions. This series of studies provides clear evidence of the effectiveness of frequent graphed PF to improve treatment integrity.

A study conducted by DiGennaro, Martens, and McIntyre (2005) found that, while daily PF was necessary for achieving high levels of implementation integrity, progressively decreasing the frequency of the PF and using negative reinforcement to maintain high levels of treatment integrity produced sustained results. This subsequently resulted in reductions in student off-task behavior. It appeared that the behavior of the teacher, in the form of treatment implementation, could be influenced through the use of contingencies of reinforcement. That is, PF used in conjunction with a negative reinforcement contingency (avoiding a meeting contingent upon adequate integrity) was effective in increasing treatment integrity, and high levels of treatment integrity were maintained while feedback and reinforcement were gradually made less frequent.

Performance feedback has also proven effective for encouraging teachers to increase their use of BSP in the classroom. Duchaine, Jolivet, and Fredrick (2011), found that teacher coaching with performance feedback was effective for training high school teachers to increase their use of BSP statements. The PF consisted of a written feedback note with information on the teacher's rate of using BSP statements and was provided every third intervention session. Teachers' rate of BSP increased from an average of .67 to 7 statements per 15-minute observation. The increase in teachers' use of BSP was maintained at the same level, or higher, during follow-up observations completed two and three weeks after PF was discontinued. Similarly, in Reinke et al., (2008), while consultation and self-monitoring alone did not increase teachers' use of

BSP, the addition of visual PF resulted in an increase in BSP rates for all participants. The PF was provided in the form of graphed data of teachers' rate of BSP and concurrent level of classroom disruptive behavior. The increased use of BSP was noted across all classrooms, primarily during the visual performance feedback phase. Additionally, teacher use of reprimands and instances of classroom disruption were noted to decrease concurrently with increased rates of BSP. Maintenance data collected one month after the visual PF had been discontinued indicated rates of BSP similar to those achieved in the PF phase, suggesting the results were maintained after the PF was no longer provided.

Pisacreta, Tincani, Connell, and Axelrod (2011) trained teachers to deliver praise at a 1:1 ratio with behavior correction, that is one praise statement delivered for each instance of behavior correction used, and evaluated the effect on students' disruptive behavior. The training included modeling of appropriate praise use, graphed PF, and both verbal and gestural prompts for praise. Results indicated that each teacher increased praise use to a ratio of at least one praise statement per instance of behavior correction, with a concurrent decrease in students' disruptive behavior. Following the training phase, a PF only phase resulted in maintenance of both the teachers' increased level of praise and students' decreased level of disruptive behavior. Additionally, two teachers demonstrated increased use of praise in classes where no training had occurred. While the results of this study are encouraging, there are no data to indicate whether the results were maintained after the PF was no longer provided.

Previous studies suggest that teachers fail to implement agreed upon interventions with integrity without ongoing consultative support (Noell et al., 2002). While PF has shown to be a promising technique to achieve and maintain high levels of

treatment integrity, the use of PF has its shortcomings. Traditionally, PF needs to be presented frequently through face-to-face contact, requiring time and resources that are not generally available in a school environment (Duchaine, Jolivet, & Fredrick, 2011). Other strategies that have been attempted include less frequent contact, and methods such as PF through email (Hemmeter, Snyder, Kinder, & Artman, 2011) or online wireless technology (Rock et al., 2009). Another issue with the use of PF to improve and maintain treatment integrity is that the feedback usually is not introduced until treatment integrity has begun to deteriorate (Myers, Simonsen, & Sugai, 2011).

Performance feedback is one of the most widely used consultation practices for increasing the extent to which teachers implement an intervention. One important limitation of PF is that it is most often implemented as a reactive consultation practice. That is, when teachers fail to consistently implement an intervention, PF is initiated in an attempt to increase teachers' intervention implementation. As a result, school-based consultation practice would benefit from consultation strategies that proactively increase the extent to which teachers implement interventions in the classroom.

School-based consultation is conducted to improve teachers' instructional and behavior management techniques, and ultimately improve outcomes for students. While PF, as a consultative practice, is often effective for improving treatment integrity, it is typically used reactively when intervention implementation has deteriorated. There is a clear need for evidence-based consultative practices that can be used to encourage intervention implementation with high levels of treatment integrity from the outset. Teacher training is an example of one such practice.

Training

Teacher training is one consultation strategy used to encourage teachers to employ evidence-based classroom management procedures, although the effectiveness of the training methods can vary considerably. Various approaches to training teachers have been employed, with comparisons between indirect training and direct training demonstrating that direct training is more effective (Dufrene et al., 2012; Moore et al., 2002; Sterling-Turner, Watson, Wildmon, Watkins, & Little, 2001). However, while simply training teachers can be effective for immediate implementation of an intervention, teachers may not maintain or adequately generalize intervention implementation following training (Noell et al., 2002).

With regard to training teachers to use BSP more frequently, several studies have evaluated training teachers to increase BSP in the classroom, with varied results regarding maintenance and generalization. Keller, Brady, and Taylor (2005) trained teachers to increase BSP and included a self-evaluation procedure in addition to training. Participants were three female undergraduate students completing the student teaching portion of their teacher education program. A 60-minute scripted training session that included information on the characteristics of BSP, the benefits of using BSP, and goal setting for the frequency of BSP was conducted. A visual prompt (i.e., cue card) was displayed in the classroom to remind the interns to frequently use BSP. The participants then used an audio recording device to record their instruction during the targeted content area, and later listened to a five-minute sample of the recorded instruction to evaluate their use of BSP. Participants were provided a graph that included their baseline frequency of BSP and a representation of the goal they had set during the training

session. They subsequently graphed their frequency of BSP use daily during the intervention. The researchers recorded the participants' instruction during non-targeted content area to probe for generalization. A multiple baseline across participants was used to evaluate the effectiveness of the self-evaluation intervention. Results indicated that all participants increased their use of BSP during instruction in the targeted content area with the introduction of the intervention; however, a decreasing trend for BSP use was demonstrated by two of the three participants during maintenance. Two participants demonstrated some increase in BSP use in non-targeted content areas during the maintenance phase. Limitations noted include the inconsistency of generalization probing and lack of data on student behavior.

In a similar study, Slider, Noell, and Williams (2006), evaluated the use of a self-study method that included print materials and videotaped models of effective classroom management strategies. The method was intended to train teachers to increase their use of BSP, effective instructional delivery (EID), and time-out. The participants were three teachers in preschool classrooms for students with speech and language delays. All three participants were certified speech therapists, with Master's degrees. After the baseline phase, where the teacher was instructed to conduct the class as she normally would, the training materials were delivered. Participants reviewed the written materials included in the package, and watched the 15- to 25-minute videos that modeled examples and non-examples of the targeted classroom management strategies. Results indicated an increase in the implementation integrity of the targeted classroom management strategies for all participants, with maintenance of the increase during two follow-up observations

conducted several days after the completion of the intervention phase. Noted limitations of this study include the lack of student outcome data and minimal follow-up data.

Although the results of these studies are encouraging, identifying effective ways to improve teacher behavior is a persistent challenge. Myers et al. (2011) targeted middle-school teachers that did not increase praise following general training in positive behavior supports, and used a Response to Intervention (RTI) approach to teacher training. That is, all teachers were provided with universal training for implementation of evidence-based classroom management strategies (e.g., BSP), and additional supports were provided to teachers that failed to respond to universal training alone. The secondary level of intervention, in this case, was a continuum of PF on each teacher's rate of praise. Results indicated that the level of PF intensity necessary varied based on the teachers' individual needs, but that, overall, PF resulted in increased use of praise statements in the classroom. The results suggest that one type or level of training may not meet the needs of all teachers, and that teacher training should be approached in a similar fashion to that with which we approach educating students. That is, a continuum of supports that includes targeted instruction and PF may benefit teachers, just as a school-wide PBIS system for social and academic behavior benefits students.

A study conducted by Armstrong, McNeil, and Van Houten (1988) used a behavioral training procedure to increase the use of BSP of all teachers at a small, rural elementary school in the northeastern region of the United States. The training procedure was referred to as the Principal's Inservice Training Package, and included a training component to provide information to teachers on the value of using BSP statements in the classroom, feedback on the rate of BSP being used before the training procedure,

modeling of appropriate use of BSP, guided practice using BSP with feedback from peers, and goal setting for a target level of BSP for the staff. Following the training, posters were placed in various locations on the school campus with messages indicating the value of using BSP in the classroom. Teachers were then expected to practice the use of BSP in their classrooms. Weekly written feedback was provided to teachers indicating his/her rate of BSP for the week. Additionally, a chart with the feedback data was posted in the staffroom with the mean rate of BSP for the school, as well as the highest rate of BSP to date. Finally, the principal regularly prompted teachers to increase their rate of BSP, as well as praised teachers that had increased their use of BSP following observation sessions. Results indicated that, following the Principal's Inservice Training package, teachers' rate of BSP increased from .07 per minute to .33 per minute, or from 4 to 20 BSP statements delivered each hour.

A subsequent presentation of the Principal's Inservice Training Package was delivered to target teachers' use of praise directed at students not working directly with the teacher (outside circle). The second presentation of the training package resulted in an increase of BSP to outside circle students from a rate of .09 per minute to .23 per minute. A year after the original data were collected, follow up data indicated that teacher use of BSP for students both inside and outside the circle remained high. While the results of this study are positive, there is no way to determine which component(s) of the Principal's Inservice Training Package are necessary to increase teachers' use of BSP.

Dufrene et al. (2012) evaluated the effectiveness of *in situ* direct training on Head Start teachers' use of praise. In this case, *in situ* refers to the fact that the direct training technique took place in the classroom while the teachers led instructional activities. Four

teachers and their Head Start students participated in the study. Following baseline, teachers were provided with didactic training for increased praise use; however, didactic training did not result in substantial increases in teachers' use of praise or concomitant decreases in children's disruptive behavior. Following didactic training, consultants provided *in situ* direct training for increased praise use via a bug-in-the-ear device (i.e., FM radio). During direct training, teachers' rate of praise increased substantially. Immediately after the direct training phase, the researchers evaluated maintenance of findings and found that three teachers maintained increased praise, with one teacher leaving the study prior to the maintenance phase to take a position with another agency. Additionally, the researchers evaluated maintenance again during one-month follow-up observations and found that the three teachers that remained in the study continued to maintain increased praise use at one-month follow-up. Finally, researchers collected data for children's disruptive behavior throughout the study and found that as teachers increased their use of praise, children's disruptive behavior decreased. The researchers hypothesized that teachers maintained praise use following training because doing so was negatively reinforced by reductions in children's disruptive behavior.

The Dufrene et al. (2012) study was not without limitations. In particular, order effects (i.e., didactic training always preceded direct training) may have influenced the results and reduces confidence that *in situ* training alone resulted in increases in the use of BSP. Additionally, the researchers did not evaluate the extent to which teachers' generalized their praise use to untrained settings. Finally, the study included only Head Start teachers and children, so the researchers were not able to make statements regarding the effectiveness of direct training with other teacher and student populations. However,

it is important to note that Dufrene et al. demonstrated that a single component consultation procedure (i.e., *in situ* direct training) could result in increased and maintained teacher praise.

In a follow-up study, Dufrene, Lestremay, and Zoder-Martell (2014) replicated the Dufrene et al. (2012) study with two teacher participants in two alternative classrooms on an elementary school campus located in a southeastern state. A multiple baseline design across teachers was used to experimentally evaluate the effectiveness of teacher training procedures. The participants were identified after routine observations to assess the integrity with which teachers at the alternative school were using BSP, and students' academically engaged behavior and disruptive behavior were evaluated. The didactic training for this study was conducted one-on-one using a training protocol in which an experimenter provided instructions for using BSP, in addition to handouts detailing the use of BSP. The training session lasted approximately 30 minutes and included the experimenter providing a rationale for the use of BSP with students and examples of BSP statements. The teacher then practiced delivering BSP statements with the experimenter providing feedback regarding the teacher's behavior. The feedback included praise for correct examples of BSP and corrective feedback for non-examples of BSP. The teacher was then given an opportunity to ask questions or solicit clarification on any issues related to training or classroom implementation. Results indicated that the didactic training procedure was followed by a marginal increase in the use of BSP for one teacher, with no increase in BSP for the other teacher.

As in the Dufrene et al. (2012) study, an *in situ* direct training procedure involving an experimenter providing the teacher with real-time prompts via a bug-in-the-

ear to deliver accurate BSP statements was then conducted. The direct training procedure resulted in increases in the use of BSP for both participants. Students' disruptive behavior decreased concomitantly with the increase in BSP. One participant maintained the use of BSP at the level attained by direct training during a one-month follow-up and a two-month follow-up. The second participant's level of BSP use dropped to that of baseline once the direct training procedure was terminated. For this participant, the direct training procedure was reinstated, and a performance feedback component was added that involved graphical representation of the previous session's data, as well as an explanation of the data. Additionally, praise and corrective feedback were provided based on the teacher's implementation of BSP during the previous day's session. The additional direct training and PF resulted in the teacher reaching the same level of BSP use that was evident during the initial direct training phase. At the one-month follow-up, this teacher's rate of BSP use fell below that of baseline, but at the two-month follow-up returned to the level attained during phases that included the direct training procedure. Like the Dufrene et al. (2012) study, the results of this study are limited by the sequencing effects created by all direct training phases being preceded by a didactic training phase. Moreover, this study did not include evaluating the extent to which teachers generalized praise use to untrained settings. However, as with Dufrene et al. (2012), results indicated that a single consultation procedure (i.e., *in situ* direct training) resulted in increased and maintained praise, albeit for one of two teachers.

Martell (2012) further replicated the findings of Dufrene et al. (2012) and Dufrene et al. (in press). Martell examined the effects of *in situ* direct training for increasing the extent to which direct care staff (DCS) at a residential facility for individuals with

intellectual disabilities increased positive interactions with residents during meals. Participants were four female DCS employed by the facility. A direct training procedure was used to prompt the DCS to engage in positive interactions with residents during mealtime. The dependent variables for DCS were the rate of positive and negative verbal interactions initiated and maintained by the DCS. An additional dependent variable was challenging behavior exhibited by residents during mealtime. In the direct training phase, the primary experimenter provided the DCS with real-time verbal prompts to initiate positive interactions. Prompts were delivered via a bug-in-the-ear device, and were delivered every two minutes. Results indicated that the direct training procedure resulted in an increase in DCS initiation of positive interactions with residents. A maintenance phase was then conducted during which the experimenter observed mealtimes, but did not provide any prompts or feedback to the DCS. For three of the four participants, the increase achieved through the direct training procedure was maintained for several observations conducted immediately after the direct training procedure had concluded, as well as during observations conducted two weeks later. When the fourth participant demonstrated a decrease in the level of positive interactions with residents, a single performance feedback session was implemented that resulted in an increase in rate of positive interactions with residents to levels above those attained with the direct training procedure. This increase was maintained during the follow up observations. While this study was conducted in a residential facility as opposed to a school setting, it has relevance for the current study as it employed a direct training procedure that was not preceded by a didactic training session. However, no data on the generalization of DCS

initiation of positive interactions with residents other than the study participants were gathered.

Generalization

One of the primary limitations of the Dufrene et al. (2012), Dufrene et al. (2014), and Martell (2012) studies is that those studies did not evaluate the extent to which *in situ* direct training led to generalized intervention use. Moreover, the consultation literature in general has failed to evaluate the extent to which consultation activities result in teachers' generalized intervention implementation (Riley-Tillman & Eckert, 2001). Generalization occurs when a behavior change that has not been directly taught takes place (Cooper, Heron, & Heward, 2007). In the early behavioral intervention and consultation literatures, generalization was thought of as a passive phenomenon, occurring without specific procedures to encourage or produce generalization. Researchers employed what might be considered "train and hope" procedures (Stokes & Baer, 1977, p. 351). That is, researchers implemented various interventions and consultation activities and hoped that clients and consultants would naturally generalize behavior change to untrained behaviors and conditions. Unfortunately, train and hope may not be the most effective method for guaranteeing generalized outcomes, as evidence suggests that generalization requires specific programming. Based on a review of research, Scheeler (2008) identified four factors that are important to the generalization and maintenance of teaching skills in the classroom. The four factors are: use of immediate feedback to promote efficient and effective acquisition of new skills, training to mastery on specific teaching skills, programming for generalization, and providing performance feedback in classroom settings. Lentz and Daly (1996) suggested

that when discussing generalization, it is important for researchers to consider that generalization will occur or not occur based on environmental events that are not part of the programmed intervention. That is, whether or not the interventionist encounters naturally occurring reinforcement (e.g., improved student behavior), for the implementation of the intervention will determine whether generalization occurs. Even with programming for generalization in place, studies that consider generalization have produced results that are inconsistent.

Riley-Tillman and Eckert (2001) provided one of the few studies to evaluate the extent to which teachers increased and generalized their use of praise following consultation. They began by providing participants with classroom-based consultation services that resulted in a recommendation for the teacher increasing use of BSP with a target student. A goal was set for the teacher to use between four and five BSP statements during a 20-minute classroom period. The consultation resulted in an increase in BSP use for all participants toward target students. Once stability or a decreasing trend was observed in post-consultation data, a generalization prompt was delivered. The generalization prompt consisted of the consultant meeting briefly with the teacher participant and asking if there were any other students in the class that might benefit from the intervention. Each teacher indicated there were other students that would benefit from increased BSP use. The generalization prompt resulted in a modest increase in BSP toward non-target students for only one teacher. As a result, generalization training was then delivered to all teacher participants. The training was conducted in a one-on-one meeting with teacher participants, where a script was used to program for generalization

using components adapted from Stokes and Osnes (1989). The generalization training did not result in clear, consistent evidence of generalization for any participants.

Duncan, Dufrene, Sterling, and Tingstrom (2013) conducted a systematic replication of the Riley-Tillman and Eckert (2001) study. Specifically, Duncan et al. (2013) evaluated the effects of generalization training with goal setting and a feedback note on teachers' BSP toward target and non-target students. During baseline, all teachers demonstrated low, stable rates of BSP towards target and non-target students. A training method was then employed that included written and verbal instructions, role-playing, practice, and PF. The intention of the training was to increase teachers' use of BSP with a target student identified by consultation with the teacher. After the training, a goal for the number of times to provide BSP to the target student was set by the consultant in collaboration with the teacher. A feedback note was then given to the teacher each day data were collected indicating whether or not the teacher had met the goal number of praise statements. If the goal was not met, the consultant briefly reviewed the intervention with the teacher, with an instruction to meet the goal the following day. Training with goal setting and the feedback note resulted in all teachers increasing their rate of BSP toward the target student, although all teachers did not meet their BSP goal for all sessions. In the next phase, a generalization prompt that consisted of the consultant asking the teacher if she had considered using BSP with any students other than the target student was delivered. No other generalization methods were used during this phase, and the feedback note was withdrawn. This resulted in a decrease in the rate of BSP for all teachers, although the rate of BSP did not decrease to baseline levels, so some maintenance of the increased use of BSP was evident. The last phase of

the study included further training for generalization of the use of BSP to the non-target students in the classroom. The generalization training consisted of a discussion of the goal for using BSP in the classroom, the possible benefits for other students, the experimenter suggesting other students in the class that might benefit from receiving acknowledgement of appropriate behavior, and a discussion of the disadvantages of reprimanding inappropriate behaviors. Goal setting and the feedback note were re-introduced, this time focusing on BSP statements used for any student in the classroom. The generalization training did not result in further increase of BSP statements toward the target students, but did result in the highest rate of BSP for non-target students across all participants. Finally, a follow-up phase that included data collected once per week for one month following the termination of goal setting and provision of a feedback note was conducted. The rate of BSP toward both target and non-target students during follow up decreased from the generalization phase. Overall, the results of Duncan et al. (2013) indicated that training, goal setting, and feedback for praising target students may be effective for increasing teachers' praise toward target students. However, those procedures may not result in generalization of praise to non-target students. Additionally, when goal setting and feedback is directed to all students, praise for non-target students may increase, but maintenance of praise to target students may deteriorate.

Summary

As disruptive behavior continues to be an issue in schools that interferes with student learning, that creates an unsafe educational environment, and that leads to teacher attrition, school administrators and other professionals will continue to search for preventative measures. The use of praise for appropriate behavior is one simple method a

teacher can use to promote and encourage classroom behaviors. Behavioral consultation can be useful for equipping teachers with the skills to effectively manage student behavior in the classroom, but is not without limitations. Direct behavioral consultation (DBC) is a promising approach that may result in increased teacher implementation of research-based classroom management strategies such as BSP. However, there are gaps in the empirical support for DBC, particularly with regard to *in situ* direct training, and teachers' generalization and maintenance of the skills and strategies they acquire.

This study involved training high school teachers to increase their use of BSP statements in their classroom, and sought to measure generalization and maintenance of BSP statement use. Disruptive behaviors were measured concurrently to provide evidence that as use of BSP statements increases, inappropriate behavior in the classroom decreased. Previous studies (Dufrene et al., 2012; Dufrene et al., in press) have demonstrated that direct training is more effective than didactic training to increase the use of BSP in preschool and elementary alternative classrooms, therefore a direct training procedure was employed.

The purpose of the current study was to extend the school-based consultation literature in two important ways. First, this was the first study to evaluate DBC in high school classrooms. Second, this study was the first to evaluate the extent to which DBC leads to maintained and generalized intervention implementation. The DBC literature is limited in that there are few empirical studies examining the efficacy of DBC, there are no demonstrations of the efficacy of DBC in high school, and there are no demonstrations of the efficacy of DBC with regard to generalized teacher intervention implementation.

Research Questions

1. Does *in situ* training via a bug-in-the-ear device increase teacher's use of BSP statements in high school classrooms after training is terminated?
2. Does *in situ* training via a bug-in-the-ear device result in maintained teacher use of BSP at one-month follow-up?
3. Does *in situ* training via a bug-in-the-ear device result in teachers' generalization of BSP use to untrained classrooms?

CHAPTER II

METHOD

Participants and Setting

The participants in this study were four female teachers referred to by pseudonyms (Ms. Shipp, Ms. Winchester, Ms. Kennedy, and Ms. Santana) and their students from four high school classrooms in a public school in the rural southeastern United States. A total of eleven classrooms were referred to the researcher by the school principal for needing help with classroom management; the four participants volunteered for inclusion in the study. The remaining referred classrooms were provided with consultation for support with classroom management.

The current study was approved by the Institutional Review Board (IRB) at the University of Southern Mississippi (see Appendix A). District and teacher consent (see Appendix B) were obtained prior to the collection of baseline data. Teachers volunteered to participate in this study following a presentation by the researcher that solicited teachers seeking assistance with classroom management. Additionally, in order to participate a teacher needed to deliver BSP at a rate below .50 BSP statements per minute during a screening observation.

All classrooms were located in a single school within the same school district. The total enrollment for the school was 615 students. Sixty-five percent of students were eligible for the free or reduced lunch program. Ms. Shipp taught English to ninth grade students. Her target class was comprised of 26 students, seven of whom had an Individualized Education Plan (IEP). Ms. Shipp's classes observed for generalization were comprised of 23 students and 25 students, respectively. All blocks were receiving

instruction in ninth grade English. Ms. Winchester taught Science to students in ninth through eleventh grade. Her target class was comprised of 22 students, four of whom had an IEP, and were receiving instruction in Natural Science. Ms. Winchester's classes observed for generalization were Botany classes comprised of 17 students in ninth and tenth grade, and 19 students in tenth and eleventh grade. Ms. Kennedy taught Math to ninth grade students. Her target class was comprised of 17 students, five of whom had an IEP. Ms. Kennedy's generalization classes were also receiving instruction in ninth grade math, and were comprised of 20 students and 23 students. Ms. Santana taught Spanish I to ninth and tenth grade students. Her target class was comprised of 27 students; none of her students had an IEP. Ms. Santana's classes observed for generalization were also receiving instruction in Spanish I. One class was comprised of 24 students and the other was comprised of 25 students.

Ms. Shipp was a first-year teacher of Caucasian descent. She was certified to teach English and had a Bachelor of Science degree in English Education. Ms. Winchester was a first-year teacher of Native American descent. She was certified to teach Science and had a Bachelor of Science degree in Behavioral and Biological Sciences. Ms. Kennedy was a first-year teacher of Caucasian descent. She was certified to teach Elementary Education and had endorsements in Reading, Language, and Math. Ms. Santana was a first-year teacher of Caucasian descent. She was certified to teach Spanish and had endorsements for Visual Arts and French.

Instruments

The PBIS Self-Assessment Survey (PBIS-SAS; see Appendix C) and the Job Satisfaction Survey (JSS; see Appendix D) were completed by teachers prior to baseline

data collection and again after the one-month follow-up phase. The PBIS-SAS (Sugai, Horner, & Todd, 2003) is a 43-item self-report inventory that evaluates teachers' perception of the presence and need for improvement of effective behavior support systems in the classroom, in non-classroom settings, school-wide, and at the individual student level. Subscale and overall scores can range between 0 and 100% of respondents who said effective behavior support systems are in place in the school. Subscale and overall scores between 50 and 70% suggest strong implementation integrity of PBIS. The PBIS-SAS has been found to have internal consistency coefficients that range from .60-.75 on the current status scales (Safran, 2006).

The JSS is a questionnaire designed to determine an employee's job satisfaction in their current position. The questionnaire is made up of 30 items to which the participant indicates a response of 'Yes' or 'No.' Items are all positively worded and include statements such as, "I feel valued and affirmed at work," "I feel positive and up most of the time I am working," and, "I am fairly compensated." Scores are calculated by awarding two points for every item with a 'Yes' response. Scores are categorized as follows: 1-19 Depressing job, 20-29 Bad job, 30-39 OK job, 40-49 Good job, and 50-60 Great job. Information on the technical adequacy of this measure is not currently available.

An acceptability measure, the Consultation Acceptability Rating Scale (CARS; see Appendix E), was created for this study. The measure is a rating scale that contains 12 items that are scored on a 6 point Likert-scale, with a score of 0 indicating Strongly Disagree, and a score of 5 indicating Strongly Agree. The items are designed to assess the consultee's level of satisfaction and acceptability of both the consultant and the

consultative practices employed. Information regarding the technical adequacy of this measure is not available, as this is the first study to use this measure.

Experimental Design and Data Analysis

A multiple baseline design (Cooper et al., 2007) across classrooms with probing for generalization was used to evaluate the effectiveness of *in situ* direct training on teacher rate of praise in target and generalization settings. The concurrent multiple baseline design included four classrooms. The following phases were evaluated: baseline, direct training, maintenance, generalization prompt (for three of the four participants), and one-month follow-up. Visual analysis (Kazdin, 2011) was used to evaluate level, trend, and variability of the data. In addition to visual analysis of data, Non-overlap of All Pairs (NAP; Parker & Vannest, 2009) was calculated to estimate consultation effects. NAP is a non-parametric method for determining overlap between each baseline datum and each intervention datum and is strongly correlated with the R^2 effect size. According to Parker and Vannest, NAP scores between 0 and .65 are considered weak effects, scores between .66 and .91 are moderate effects, and scores between .92 and 1.0 are considered strong effects. NAP was calculated for BSP in the target classrooms by comparing the baseline rate of BSP to maintenance, GP, and follow-up rates of BSP. The DBC phase rate of BSP in target classrooms was not included in the comparison, as it represents behavior that was prompted by the primary investigator. NAP was calculated for DB in the target classrooms by comparing the percentage of intervals of DB in baseline to the percentage of intervals of DB in the DBC, maintenance, GP, and follow-up phases. NAP was calculated for BSP in the generalization classrooms by comparing the baseline rate of BSP to DBC, maintenance, GP, and follow-up rates of BSP. The DBC phase rate of BSP

was included in the comparison, as it represents generalized use of BSP as a result of DBC implemented in the target classrooms. NAP was calculated for DB in the generalization classrooms by comparing the percentage of intervals of DB in baseline to the percentage of intervals of DB in the DBC, maintenance, GP, and follow-up phases.

Dependent Variables and Data Collection Procedures

The primary dependent variable for this study was teachers' rate of BSP. Teacher implementation of BSP was recorded manually using observational coding forms (see Appendix F). BSP was defined as any response dependent, specific, labeled praise statement that includes a description of the behavior being praised (e.g., "Great job attending to lecture!"). Teacher delivered BSP was recorded using an event recording procedure where frequency of BSP statements within 10-s intervals was recorded, converted to a rate-based measure, and reported as the number of BSP statements per minute during 20-minute observation sessions. A secondary dependent variable, students' disruptive behavior, was observed, and included out of seat, inappropriate vocalizations, and playing with objects. Out of seat was defined as no part of the student's buttocks in contact with a seat, including standing or walking around without permission. Inappropriate vocalizations was defined as the student making any vocal, audible noise unrelated to the task at hand such as talking, mumbling, yelling, singing, or humming. Playing with objects was defined as student(s) manipulating objects or materials in a manner unrelated to the academic task, throwing objects, or tapping fingers or objects on a desk, twisting hair, or rocking desk/chair. The precise nature of students' disruptive behavior was determined and operationalized in collaboration with the classroom teachers that agreed to participate in this study. Disruptive classroom behavior

was recorded using a momentary time sampling method during the 20-minute observation sessions (i.e., concurrent with coding for teacher praise statements). For each 10-s interval, the observer observed a row or cluster of students and indicated if disruptive behavior was present by any student during the first 2 seconds of the interval. The observer then moved to the next row or cluster of students, starting over with the first row once all rows/clusters had been observed. Rows or clusters were comprised of three to five students. Observing the alternating rows continued until the 20-minute observation was complete. Disruptive behavior data are reported as the percentage of intervals of occurrence of disruptive behavior.

For at least every third observation session, a generalization probe was conducted on the same school day in a randomly selected class period where training did not occur throughout all phases. Random selection of the class period to observe was completed by writing the numbers of the untrained periods the teacher had classes on slips of paper, and pulling one from a hat. The slip of paper was then replaced. If the same class period was chosen for two consecutive observations, it was not replaced for the next (3rd) choice. Therefore, no class period was observed for generalization more than two consecutive times. These generalization observations were conducted by a member of the research team not associated with training to minimize teacher reactivity during the generalization probes. Generalization observations were conducted every second or third observation throughout the course of the study, across all phases.

Observations were conducted by graduate students who were previously trained to conduct behavioral observations for a variety of target behaviors to a 90% agreement criterion. Additionally, the primary researcher met with all observers prior to data

collection and reviewed operational definitions of target behaviors and observation recording procedures. Moreover, each observer met a 90% agreement criterion for BSP and disruptive classroom behavior before serving as an observer for this study. A primary observer was designated for each observation and the graphed score is the score collected by this observer. Observers sat in a nonobtrusive location in the classroom while conducting observations and used a digital audio device to cue interval changes. If interobserver agreement fell below 90% for any observation, observers were retrained until the 90% criterion was again met.

Procedures

Baseline

During baseline, researchers did not provide any instructions to teachers, or provide any feedback regarding performance. Observers sat in an unobtrusive location in the classroom and conducted observations of both teacher and student behavior.

Direct behavioral consultation

Following the baseline phase, the researcher met briefly (i.e. less than 5 minutes) with the teacher to orient her to the bug-in-the-ear device and explain that she would be prompted to deliver a BSP statement every two minutes. Examples and non-examples of BSP statements were reviewed. It was suggested that increasing the use of BSP would likely result in improved student behavior in the classroom. Previous research conducted in high school classrooms has found that increasing teachers' rate of BSP to at least once every two minutes has produced measurable change in students' behavior (Blaze et al., in press; Duchaine et al., 2011; Sutherland, Lewis-Palmer, Stichter, & Morgan, 2008). During the DBC phase, a bug-in-the-ear device was used to direct the teacher to deliver

BSP statements every two minutes. The researcher sat in an unobtrusive location in the classroom and used a timer to determine the two-minute intervals. At each two minute-interval, the researcher scanned the room, identified a student or group of students engaged in appropriate behavior, and then relayed a BSP statement to the teacher. The teacher then repeated, verbatim, the BSP statement. If the teacher emitted a BSP statement prior to being prompted by the researcher, then the two-minute interval was reset. Trained observers again sat in an unobtrusive location in the classroom and recorded teacher and student behavior. Teachers were not given any instruction outside of the prompting for BSP, nor were they given feedback following the session.

Maintenance

Once the direct training procedure was discontinued, the maintenance phase began on the next school day. During the maintenance phase, the teacher was not given any instructions or feedback. Trained observers again sat in an unobtrusive location in the classroom and conducted observations of teacher and student behavior in a manner identical to previous phases. The maintenance phase included a minimum of five sessions and was terminated following stable data at or above a rate of .25 BSP per minute. During baseline observations, there were a total of 4 BSP statements delivered across four participants and 26 observations, with 22 observations that included no use of BSP. Therefore, a rate of .25 BSP was determined to be a substantial increase over the baseline level of BSP based on the professional judgment of the primary researcher.

One teacher, Ms. Shipp, maintained a rate of BSP above the .25 criterion level. For three teachers (Ms. Winchester, Ms. Kennedy, and Ms. Santana), rate of BSP during the maintenance phase dropped below the criterion level of .25 per minute. As a result, a

PF procedure was implemented. PF for maintaining BSP in target classrooms included one brief meeting that lasted less than five minutes. During the meeting, graphed data from the trained class were provided and reviewed. The data included teacher rate of BSP through the baseline, training, and maintenance phases, as well as student level of DB through these phases.

Ms. Shipp demonstrated a moderate increase in BSP in generalization classes during the maintenance phase. Ms. Winchester, Ms. Kennedy, and Ms. Santana did not demonstrate an increase in BSP in generalization classes to the criterion level (i.e., .25 per minute). As a result, a GP and PF were provided for these teachers to increase BSP in their generalization classes. The GP and PF procedure was similar to the PF meeting and included reviewing graphed data of the teacher's rate of BSP and student DB in trained and generalization classes (Keller et al., 2005; Reinke et al., 2008). It was suggested that increasing the rate of BSP in the generalization classes may help decrease the level of student disruptive behavior.

One-month follow-up

One month after the maintenance phase, PF or GP and PF phase ended, the one-month follow-up phase was conducted where observations were completed to determine if the teacher's rate of BSP had been maintained, and if the level of disruptive behavior in the classroom remained the same. Observations were conducted in the same manner as during baseline and maintenance phases. That is, teachers were not provided with any training or feedback.

Phase change decisions

Phase changes were determined by visual analysis of level, trend, and stability of BSP data. Specifically, the first classroom to begin the DBC phase was chosen based on a low, stable rate of BSP in baseline. When there was a treatment effect for DBC in the first classroom, DBC was implemented in the second classroom displaying low, stable rate of BSP in baseline. Identical phase change rules were used for classrooms three and four in the multiple baseline. The DBC phase included a minimum of 5 sessions and was continued until the teacher demonstrated a rate of BSP greater than baseline for 5 consecutive sessions. The maintenance phase included a minimum of five sessions and was terminated following stable data at or above a rate of .25 BSP per minute, with PF being provided if the criterion rate BSP was not maintained. If the observations to probe for generalization indicated the teacher was not increasing her use of BSP in classes where no training has occurred, a generalization prompt using graphed PF was used. Following the maintenance phase, a one-month follow-up phase was completed that again included observations of teacher and student behavior for a minimum of three sessions, with the exception of Ms. Winchester's class, where the follow-up phase was limited to two observations due to unit testing.

Interobserver Agreement and Procedural Integrity

Interobserver agreement (IOA) data were collected for at least 30% of the observational sessions for all dependent variables across each participant and each phase. A second data collector observed the class at the same time as the primary observer and collected data on both teacher use of BSP and students' DB. Agreement for teacher use of BSP was calculated by dividing the number of agreed on BSP statements within

intervals by the number of agreed and disagreed upon BSP statements within intervals and multiplying the quotient by 100. Agreement for students' DB was calculated by dividing the number of agreed intervals with DB by the number of agreed and disagreed upon intervals with DB and multiplying the quotient by 100.

IOA data were collected for 35% of the observations in Ms. Shipp's class where the DBC procedure occurred. Mean agreement for BSP was 99% (range, 98-100%) and for DB was 95% (range, 93-98%). IOA data were collected for 30% of generalization probes conducted in Ms. Shipp's classes where DBC did not occur. Mean agreement for BSP was 98% (range, 95-100%) and for DB was 94% (range, 92-98%).

IOA data were collected for 33% of the observations in Ms. Winchester's class where the DBC procedure occurred. Mean agreement for BSP was 99% (range, 96-100%) and for DB was 91% (range, 86-97%). IOA data were collected for 30% of generalization probes conducted in Ms. Winchester's classes where DBC did not occur. Mean agreement for BSP was 99% (range, 97-100%) and for DB was 96% (range, 91-98%).

IOA data were collected for 32% of the observations in Ms. Kennedy's class where the DBC procedure occurred. Mean agreement for BSP was 99% (range, 97-100%) and for DB was 92% (range, 88-96%). IOA data were collected for 31% of generalization probes conducted in Ms. Kennedy's classes where DBC did not occur. Mean agreement for BSP was 100% and for DB was 95% (range 90-97%).

IOA data were collected for 32% of the observations in Ms. Santana's class where the DBC procedure occurred. Mean agreement for BSP was 98% (range, 95-100%) and for DB was 94% (range, 88-100%). IOA data were collected for 33% of generalization

probes conducted in Ms. Santana's classes where DBC did not occur. Mean agreement for BSP was 100% and for DB was 94% (range, 87-98%).

Procedural integrity data were collected for experimental procedures using checklists for each phase. The checklist for the baseline phase (see Appendix G) included items indicating that the observers sat in an unobtrusive location in the classroom and the teacher was not given any instructions or prompted in any way. The checklist for the DBC phase (see Appendix H) included items stating that the observers again sat in an unobtrusive location in the classroom, the researcher delivered prompts to the teacher at 2 minute intervals, the teacher delivered the prompted BSP statements every 2 minutes, and the BSP statements described the behavior being exhibited by the student being praised. The maintenance and follow-up checklists (see Appendix I) included items stating that the observers again sat in an unobtrusive location in the classroom, and that the teacher was not provided with instructions, prompts, or feedback during these phases. Procedural integrity was evaluated for at least 25% of the sessions by condition, and was calculated by dividing the number of steps completed accurately by the total number of steps on the checklist and multiplying by 100. IOA for procedural integrity was collected for at least 25% of the sessions for which procedural integrity data were collected.

Procedural integrity was evaluated in 100% of the observation sessions using a checklist completed by the primary observer. Integrity was calculated based on the percentage of steps that the observer(s) accurately implemented; procedural integrity was 100% across all phases for all participants. A second observer independently evaluated procedural integrity in 32% of sessions. Agreement for procedural integrity was 100%.

CHAPTER III

RESULTS

Results for teachers' BSP and students' DB for target and generalization classrooms are displayed in Figure 1.

Descriptive statistics for BSP and DB for target classrooms by teacher and phase are presented in Tables 1 and 2, respectively. Descriptive statistics for BSP and DB for generalization classrooms by teacher and phase are presented in Tables 3 and 4, respectively.

Ms. Shipp

During baseline Ms. Shipp did not deliver BSP in the target classroom and during the generalization probe, delivered .05 BSP per minute. During baseline, the mean percentage of intervals with DB was 33% (range, 25-43%) in the class identified for the DBC procedure, and 28% in the class where the generalization probe was conducted.

When DBC was implemented, there was an immediate increase in the rate of BSP to the criterion level (i.e., .50 BSP per minute), or above, in the class where DBC occurred ($M = .53$ BSP per minute; range, .50-.60). An increase in the rate of BSP in the classes where no DBC occurred was also evident, with the mean rate of BSP being .10 (range, .05-.15). A decreasing trend was noted in the percentage of intervals with DB in the class where DBC occurred, with the mean being 25% (range, 17-33%). The generalization probes conducted in classes where DBC did not occur indicated a mean percentage of intervals with DB of 37% (range, 25-48%).

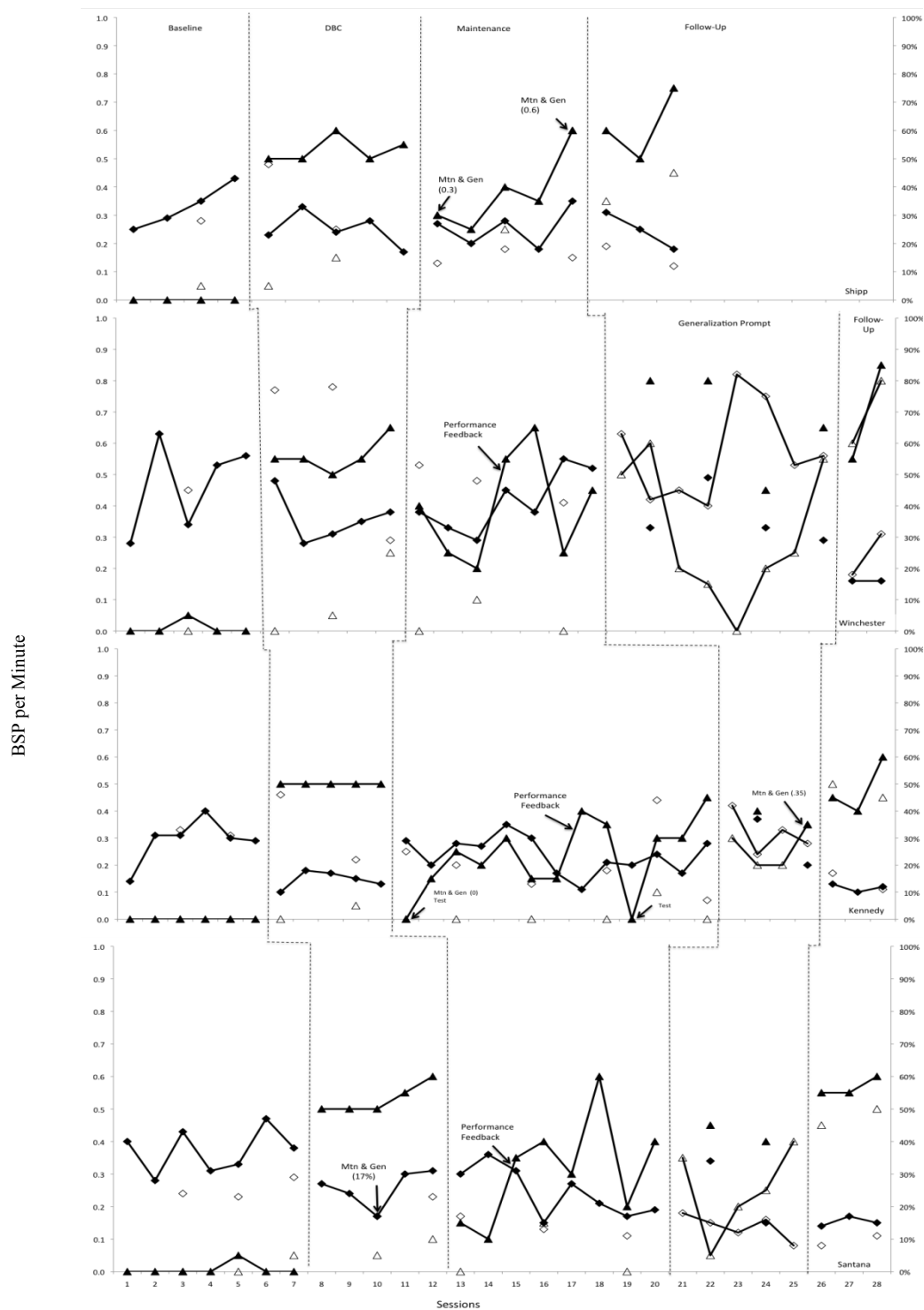


Figure 1. Rate of BSP per minute and percentage of intervals with DB.

Table 1

Mean Behavior Specific Praise Rate Per Minute by Condition For Target Classrooms

Teacher	Baseline	DBC	Maintenance	GP	One-month Follow-up
Shipp	0 *	.53 (.50-.60)	.38 (.25-.60)	na	.62 (.60-.75)
Winchester	.01 (0-.05)	.56 (.50-.65)	.39 (.20-.65)	.68 (.45-.80)	.70 (.55-.85)
Kennedy	0 *	.50 *	.23 (0-.45)	.38 (.35-.40)	.48 (.40-.60)
Santana	.01 (0-.05)	.53 (.50-.60)	.31 (.10-.60)	.43 (.40-.45)	.57 (.55-.60)

Note. Asterisk represents instances in which all scores are the same (no range).

Table 2

*Mean Percentage of Intervals with Disruptive Behavior by Condition For Target**Classrooms*

Teacher	Baseline	DBC	Maintenance	GP	One-Month Follow-Up
Shipp	33% (25-43%)	25% (17-33%)	26% (18-35%)	na	25% (18-31%)
Winchester	47% (28-63%)	36% (28-48%)	41% (29-55%)	36% (29-49%)	16% *
Kennedy	29% (14-40%)	15% (10-18%)	24% (11-35%)	29% (20-37%)	12% (10-13%)
Santana	37% (28-47%)	26% (17-31%)	25% (15-36%)	25% (15-34%)	15% (14-17%)

Note. Asterisk represents instances in which all scores are the same (no range).

Table 3

Mean Behavior Specific Praise Rate Per Minute by Condition For Classes Where Generalization Probes Were Conducted

Teacher	Baseline	DBC	Maintenance	GP	One-month Follow-up
Shipp	.05 *	.10 (.05-.15)	.38 (.25-.60)	na	.40 (.35-.45)
Winchester	0 *	.10 (0-.25)	.03 (0-.10)	.31 (0-.60)	.70 (.60-.80)
Kennedy	0 *	.03 (0-.05)	.02 (0-.10)	.26 (.20-.35)	.48 (.45-.50)
Santana	.02 (0-.05)	.08 (.05-.10)	.05 (0-.15)	.25 (.05-.40)	.48 (.45-.50)

Note. Asterisk represents instances in which all scores are the same (no range).

Table 4

Mean Percentage of Intervals with Disruptive Behavior by Condition For Classes Where Generalization Probes Were Conducted

Teacher	Baseline	DBC	Maintenance	GP	One-month Follow-up
Shipp	28% *	37% (25-48%)	15% (13-18%)	na	16% (13-18%)
Winchester	45% *	61% (29-78%)	47% (41-53%)	57% (40-82%)	25% (18-31%)
Kennedy	32% (31-33%)	34% (22-46%)	21% (7-44%)	32% (24-42%)	14% (11-17%)
Santana	25% (23-29%)	20% (17-23%)	14% (11-17%)	14% (8-18%)	10% (8-11%)

Note. Asterisk represents instances in which all scores are the same (no range).

During the maintenance phase, Ms. Shipp's rate of BSP initially decreased slightly, but showed an increasing trend ($M = .38$; range, .25-.60) in the class where DBC was conducted. Generalization probes conducted in classes where DBC was not implemented also indicated an increasing trend in BSP rate ($M = .38$; range, .25-.60). The percentage of intervals with student DB during the maintenance phase showed a slight decreasing

trend in the DBC class ($M=26\%$; range, 18-35%) and a low, stable percentage of intervals with DB in the classes where generalization probes were conducted ($M = 15\%$; range, 13-18%).

At one-month follow-up, Ms. Shipp's rate of BSP continued to be at or above the criterion level (i.e., .25 BSP per minute) in the DBC class. Her average rate of BSP during this phase was .62 (range, .60-.75) in the class where DBC occurred. Generalization probes conducted in classes where DBC did not occur indicated mean rate of BSP of .40 (range, .35-.45). Student levels of DB demonstrated a decreasing trend in both the DBC class ($M = 25\%$; range, 18%-31%) and the classes where DBC did not occur ($M = 16$; range, 12%-19%).

Ms. Winchester

Descriptive statistics for BSP and DB across phases for both Ms. Winchester's trained and untrained classes are represented in Tables 1 and 2. Baseline data for rate of BSP were stable and remained low during all observations in the class identified for DBC ($M = .01$; range, 0-.05) and Ms. Winchester did not deliver BSP in the generalization class. During baseline, the mean percentage of intervals with DB was 47% (range, 28-63%) in the class identified for the DBC procedure, and 45% in the class where the generalization probe was conducted.

When DBC was implemented, there was an immediate increase in the rate of BSP to the criterion level (i.e., .50 BSP per minute), or above, in the class where DBC occurred ($M = .56$; range, .50-.65). An increase in the rate of BSP in the classes where no DBC occurred was also evident, with the mean rate of BSP being .10 (range, .05-.25). A decrease in the level of DB was evident in the class where DBC occurred, with the mean

being 36% (range 28-48%). The generalization probes conducted in classes where DBC did not occur indicated a mean percentage of intervals with DB of 61% (range 29-78%).

During the maintenance phase, Ms. Winchester's rate of BSP initially demonstrated a decreasing trend, therefore PF was conducted, after which her rate of BSP was somewhat variable. The mean rate of BSP for this phase was .39 (range, .20-.65), although the mean rate of BSP prior to PF was .34 (range, .20-.40) and after PF was .45 (range, .25-.65). Generalization probes conducted in classes where DBC was not conducted also indicated a low and stable BSP rate ($M = .03$; range, 0-.10) across the phase. The percentage of intervals with student DB during the maintenance phase showed a variable yet increasing trend in the DBC class ($M = 41\%$; range, 29-55%) and a slight decreasing trend in the percentage of intervals with DB in the classes where generalization probes were conducted ($M = 47\%$; range, 41-53%).

Ms. Winchester's rate of BSP in the classes where DBC did not occur was below the criterion level (i.e., .25 BSP per minute), and the generalization prompt was delivered. In the generalization prompt phase, rates of BSP in both the DBC class and the classes where DBC did not occur demonstrated a good deal of variability. The mean rate of BSP for this phase in the DBC class was .68 (range, .45-.80) and in the classes where no DBC occurred was .31 (range, 0-.60). The levels of student DB during this phase were also quite variable, with the mean percentage of intervals with DB in the DBC class being 36% (range, 29-49%) and in the classes where DBC did not occur 57% (range, 40-82%).

At one-month follow-up, Ms. Winchester's rate of BSP continued to be at or above the criterion level (i.e., .25 BSP per minute) in both the DBC class and the classes where

DBC did not occur. Her average rate of BSP during this phase was .70 (range, .55-.85) in the class where DBC occurred. Generalization probes conducted in classes where DBC did not occur indicated a mean rate of BSP of .70 (range, .60-.80). Student levels of DB demonstrated a low, stable trend in the DBC class ($M = 16\%$) and a low but increasing trend in the classes where DBC did not occur ($M = 25\%$; range, 18-31%).

Ms. Kennedy

During baseline Ms. Kennedy did not deliver a BSP statement in the target or generalization classrooms. During baseline, the mean percentage of intervals with DB was 29% (range, 14-40%) in the class identified for the DBC procedure, and 32% (range, 31-33%) in the classes where the generalization probes were conducted.

When DBC was implemented, there was an immediate increase in the rate of BSP to the criterion level (i.e., .50 BSP per minute), or above, in the class where DBC occurred ($M = .50$). A slight increase in the rate of BSP in the classes where no DBC occurred was also evident, with the mean rate of BSP being .03 (range, 0-.05). A decrease in the level of the percentage of intervals with DB in the class where DBC occurred was also evident, with the mean being 15% (range, 10-18%). The generalization probes conducted in classes where DBC did not occur indicated a mean percentage of intervals with DB of 34% (range, 22-46%).

During the maintenance phase, Ms. Kennedy's rate of BSP initially dropped and was somewhat variable and below the criterion level (i.e., .25 BSP per minute), therefore PF was conducted, after which her rate of BSP was higher but continued to be somewhat variable. The mean rate of BSP for this phase was .23 (range, 0-.45), although the mean rate of BSP prior to PF was .17 (range, 0-.30) and after PF was .30 (range, 0-.45).

Generalization probes conducted in classes where DBC was not conducted indicated a low and stable BSP rate ($M = .02$; range, 0-.10) across the phase. The percentage of intervals with student DB during the maintenance phase was variable in both the DBC class ($M = 24\%$; range, 11-35%) and in the classes where generalization probes were conducted and DBC did not occur ($M = 21\%$; range, 7-44%).

As Ms. Kennedy's rate of BSP in the classes where DBC did not occur was below the criterion level (i.e., .25 BSP per minute), a generalization prompt was delivered. In the generalization prompt phase, rates of BSP in both the DBC class and the classes where DBC did not occur demonstrated stability above the criterion level. The mean rate of BSP for this phase in the DBC class was .38 (range, .35-.40) and in the classes where no DBC occurred was .26 (range, .20-.35). The levels of student DB during this phase show a decreasing trend in both the class where DBC occurred and the classes where DBC did not occur. The mean percentage of intervals with DB in the DBC class was 29% (range, 20-37%) and in the classes where DBC did not occur was 32% (range, 24-42%).

At one-month follow-up, Ms. Kennedy's rate of BSP continued to be at or above the criterion level (i.e., .25 BSP per minute) in both the DBC class and the classes where DBC did not occur. Her average rate of BSP during this phase was .48 (range, .40-.60) in the class where DBC occurred. Generalization probes conducted in classes where DBC did not occur indicated mean rate of BSP of .48 (range, .45-.50). Student levels of DB demonstrated a low, stable trend in both the DBC class ($M = 12\%$; range, 10-13%) and in the classes where DBC did not occur ($M = 14\%$; range, 11-17%).

Ms. Santana

Baseline data for the rate of BSP were stable and remained low during all observations in the class identified for DBC ($M = .01$; range, 0-.05) and the class where the generalization probe was conducted ($M = .02$; range, 0-.05). During baseline, the mean percentage of intervals with DB was 37% (range, 28-47%) in the class identified for the DBC procedure, and 25% (range, 23-29%) in the classes where the generalization probes were conducted.

When DBC was implemented, there was an immediate increase in the rate of BSP to the criterion level (i.e., .50 BSP per minute), or above, in the class where DBC occurred ($M = .53$; range, .50-.60). A slight increase in the rate of BSP in the classes where no DBC occurred was also evident, with the mean rate of BSP being .08 (range, .05-.10). A decrease in the level of the percentage of intervals with DB in the class where DBC occurred was also evident, with the mean being 26% (range, 17-31%). The generalization probes conducted in classes where DBC did not occur indicated a mean percentage of intervals with DB of 20% (range, 17-23%).

During the maintenance phase, Ms. Santana's rate of BSP initially dropped below the criterion level (i.e., .25 BSP per minute) and showed a decreasing trend, therefore PF was conducted, after which her rate of BSP was higher but continued to be somewhat variable. The mean rate of BSP for this phase was .31 (range, .10-.60), although the mean rate of BSP prior to PF was .13 (range, .10-.15) and after PF was .38 (range, .20-.60). Generalization probes conducted in classes where DBC was not conducted indicated a low but somewhat variable BSP rate ($M = .05$; range, 0-.15) across the phase. The percentage of intervals with student DB during the maintenance phase showed a

decreasing trend in both the DBC class ($M = 25\%$; range, 15-36%) and in the classes where generalization probes were conducted and DBC did not occur ($M = 14\%$; range, 11-17%).

As Ms. Santana's rate of BSP in the classes where DBC did not occur was below the criterion level (i.e., .25 BSP per minute), a generalization prompt was delivered. In the generalization prompt phase, rates of BSP in the DBC class was stable and above the criterion level, which in the classes where DBC did not occur a variable trend was evident. The mean rate of BSP for this phase in the DBC class was .43 (range, .40-.45) and in the classes where no DBC occurred was .25 (range, .05-.40). The levels of student DB during this phase show a decreasing trend in both the class where DBC occurred and the classes where DBC did not occur. The mean percentage of intervals with DB in the DBC class was 25% (range, 15-34%) and in the classes where DBC did not occur was 14% (range, 8-18%).

At one-month follow-up, Ms. Santana's rate of BSP continued to be at or above the criterion level (i.e., .25 BSP per minute) in both the DBC class and the classes where DBC did not occur. Her average rate of BSP during this phase was .57 (range, .55-.60) in the class where DBC occurred. Generalization probes conducted in classes where DBC did not occur indicated mean rate of BSP of .48 (range, .45-.50). Student levels of DB demonstrated a low, stable trend in both the DBC class ($M = 15\%$; range, 14-17%) and in the classes where DBC did not occur ($M = 10\%$; range, 8-11%). It's important to note that the students in Ms. Santana's classes at one-month follow-up were different than the students in her classes for prior observations. Ms. Santana's classes were semester-long

and her class roster changed at the beginning of the spring semester, two-weeks prior to the observations conducted for the one-month follow-up phase.

Effect Size Calculation

Table 5 includes NAP scores for BSP and DB by teacher and classroom. Overall, results indicate that there was a strong effect on the rate of BSP for the DBC procedure in trained classes and a moderate effect in generalization classes. Results also indicate that the increase in rate of BSP resulted in a moderate effect on DB in trained classes and generalization classes.

Table 5

NAP Effect Size

Teacher	Trained Classes BSP		Generalization Classes BSP		Trained Classes DB		Generalization Classes DB	
	NAP	Effect Size	NAP	Effect Size	NAP	Effect Size	NAP	Effect Size
Shipp	1.0	Strong	.93	Strong	.83	Moderate	.86	Moderate
Winchester	1.0	Strong	.90	Moderate	.72	Moderate	.41	Weak
Kennedy	.94	Strong	.81	Moderate	.80	Moderate	.73	Moderate
Santana	1.0	Strong	.86	Moderate	.91	Moderate	.99	Strong

Note. BSP = behavior specific praise; DB = disruptive behavior.

PBIS-SAS

Each teacher completed the PBIS-SAS prior to participating in the DBC procedure, and again after follow-up data had been collected. Prior to DBC, Ms. Shipp indicated that 50% of the components of School-Wide Systems were in-place. She rated the steps not in place as being of medium priority for improvement. Prior to DBC, Ms. Shipp indicated that 22% of the components of Non-classroom Setting Systems were in place.

She rated three as high priority and four as medium priority for improvement. Prior to DBC, Ms. Shipp rated 73% of the components of Classroom Systems as in place. She rated one of high priority and two of medium priority for improvement. Prior to DBC, Ms. Shipp rated 63% of the components of Individual Student Systems were in place. She rated one as high priority and two as medium priority for improvement.

After the conclusion of the study, Ms. Shipp indicated that 72% of the components of School-Wide Systems were in place. She rated one as high priority and four as medium priority for improvement. After the conclusion of the study, Ms. Shipp indicated that 33% of the components of Non-classroom Setting Systems were in place. She rated one to be of high priority and five to be of medium priority for improvement. After the conclusion of the study, Ms. Shipp rated 100% of the components of Classroom Systems as well as 100% of the components of the Individual Student Systems as in place.

Prior to DBC, Ms. Winchester indicated that 67% of the components of School-Wide Systems were in place. She rated five to be of medium priority and one to be of low priority for improvement. Before DBC, Ms. Winchester rated 78% of the components of Non-classroom Setting Systems as in place. She rated two as being medium priority for improvement. Prior to DBC, Ms. Winchester rated 18% of the components of Classroom Systems as in place. She rated one of high priority and eight of medium priority for improvement. Prior to DBC, Ms. Winchester indicated that 38% of the components of Individual Student Systems were in place. She rated two as high priority and three as medium priority for improvement.

After the conclusion of the study, Ms. Winchester indicated that 78% of the components of School-Wide Systems were in place. She rated three as high priority for

improvement and one as medium priority for improvement. After the conclusion of the study, Ms. Winchester indicated that 100% of the components of Non-classroom Setting Systems were in place. After the conclusion of the study, Ms. Winchester rated 36% of the components of Classroom Systems as in place. She rated three as being high priority and four as being medium priority for improvement. After the conclusion of the study, Ms. Winchester indicated 88% of the components of the Individual Student Systems were in place. She rated one component as being of medium importance for improvement.

Prior to DBC, Ms. Kennedy rated 78% of the components of School-Wide Systems as in-place. She rated three to be of high priority and one to be of medium priority for improvement. Prior to DBC, Ms. Kennedy rated 100% of the components of Non-classroom Setting Systems as in place. Prior to DBC, Ms. Kennedy rated 45% of the components of Classroom Systems as in place. She rated six to be of medium priority for improvement. Prior to DBC, Ms. Kennedy rated 88% of the components of Individual Student Systems as in place. She rated one component as medium priority for improvement.

After the conclusion of the study, Ms. Kennedy rated 50% of the components of School-Wide Systems as in place. She indicated all nine as medium priority for improvement. After the conclusion of the study, Ms. Kennedy rated 89% of the components of Non-classroom Setting Systems as in place. She rated one component as medium priority for improvement. After the conclusion of the study, Ms. Kennedy rated 82% of the components of Classroom Systems as in place. She rated one as being medium priority and one as being low priority for improvement. After the conclusion of

the study, Ms. Kennedy rated 88% of the components of the Individual Student Systems as in place. She indicated one component as high priority for improvement.

Prior to DBC, Ms. Santana rated 83% of the components of School-Wide Systems as in place. She indicated all three of medium priority for improvement. Prior to DBC, Ms. Santana rated 67% of the components of Non-classroom Setting Systems as in place. She rated six components as high priority for improvement. Prior to DBC, Ms. Santana rated 82% of the components Classroom Systems as in place. She rated two components as high priority for improvement. Prior to DBC, Ms. Santana rated 50% of the components of Individual Student Systems as in place. She rated one component as high priority and three components as medium priority for improvement.

After the conclusion of the study, Ms. Santana rated 78% of the components of School-Wide Systems as in place. She rated three as medium priority and one as low priority for improvement. After the conclusion of the study, Ms. Santana rated 78% of the components of Non-classroom Setting Systems as in place. She rated two components of medium priority for improvement. After the conclusion of the study, Ms. Santana rated 100% of the components of Classroom Systems as in place. After the conclusion of the study, Ms. Santana rated 75% of the components of the Individual Student Systems as in place. She rated two components as medium priority for improvement.

JSS

All participants completed the JSS before participating in the DBC procedure and after the follow-up phase was completed. Prior to participating in the DBC procedure, Ms. Shipp scored 48 on the JSS, indicating she rated her teaching position as a Good Job.

After participating in the DBC procedure she scored 52 on the JSS, indicating she rated her teaching position as a Great Job. Prior to participating in the DBC procedure, Ms. Winchester scored 48 on the JSS, indicating she rated her teaching position as a Good Job. After participating in the DBC procedure, she scored 56 on the JSS, indicating she rated her teaching position as a Great Job. Prior to participating in the DBC procedure, Ms. Kennedy scored 52 on the JSS, indicating she rated her teaching position as a Great Job. After participating in the DBC procedure, she scored 60 on the JSS, indicating she continued to rate her teaching position as a Great Job. Prior to participating in the DBC procedure, Ms. Santana scored 50 on the JSS, indicating she rated her teaching position as a Great Job. After participating in the DBC procedure, she again scored 50 on the JSS, indicating she continued to rate her teaching position as a Great Job.

Acceptability of Consultation Procedures

All participants completed the CARS at the conclusion of the study. Each participant indicated the maximum possible score for acceptability (i.e. 60), indicating all found it a highly acceptable and beneficial consultative procedure.

CHAPTER IV

DISCUSSION

The consultation literature provides numerous examples of methods for improving teachers' implementation of classroom management (e.g., BSP) and intervention strategies. Empirically supported strategies for improving teachers' use of classroom management and intervention strategies include PF and direct training. However, there are some important gaps in the consultation literature. With regard to PF, the majority of studies that have used PF have done so in a reactive manner. That is, PF was triggered when teachers' implementation of a procedure declined. Moreover, when proactive direct training procedures have been employed, they have typically included resource intensive training procedures followed by additional consultation procedures (e.g., Coffee & Kratochwill, 2013; Duncan et al., 2013; Riley-Tillman & Eckert, 2001) that have not demonstrated maintenance or generalization. As a result, additional research is needed in testing a proactive approach to increasing teachers' use of an evidence-based classroom management strategy while evaluating maintenance and generalization of the skills targeted in consultation. This study extends the consultation literature in some important ways. First, this study is the first to test the DBC *in situ* training procedure using a bug-in-ear device for increasing high school teachers' BSP. Second, this study is one of the few studies that evaluated generalized BSP following training.

With regard to the first research question (i.e., Does *in situ* training via a bug-in-the-ear device increase teacher's use of BSP statements in high school classrooms after training is terminated?), results indicate that *in situ* training via a bug-in-the-ear device increased teachers' use of BSP statements in high school classrooms after training was

terminated. However, there was some variability in the extent to which teachers maintained BSP following termination of *in situ* training. First, visual analysis of Ms. Shipp's BSP data indicate that she maintained BSP immediately after *in situ* training was terminated and at one-month follow-up. However, for Ms. Winchester, Ms. Kennedy, and Ms. Santana, there was some deterioration in BSP in the sessions following the termination of DBC. One brief PF meeting resulted in increases in BSP that were maintained at one-month follow-up for all three teachers.

Results regarding maintenance of teachers' BSP are similar to findings from Bowles and Nelson (1976) in which bug-in-the-ear *in situ* training resulted in teachers' maintained praise use in the classroom. However, results from this study demonstrate greater maintenance of teacher BSP relative to Matheson and Shriver (2005), where results were modest to begin with and deteriorated over time, and Coffee and Kratochwill (2013), which did not result in significant gains in teachers' use of praise. Additionally, results from this study demonstrate greater maintenance of teachers' increased use of BSP than Duncan et al. (2013) and Riley-Tillman and Eckert (2001), both of which did not demonstrate meaningful gains that were maintained after consultation services were ended. This study demonstrated greater maintenance than studies that used more traditional BC techniques. Direct *in situ* training is superior to direct training that is conducted outside the classroom environment.

With regard to the second research question (i.e., Does *in situ* training via a bug-in-the-ear device result in maintained teacher use of BSP at one-month follow-up?), results indicate that during the one-month follow-up all four teachers maintained a rate of BSP at

or above the level attained during the DBC procedure, albeit with three participants requiring one brief PF feedback session during the maintenance phase.

Few studies have evaluated follow-up after a teacher training procedure to determine the extent to which results were maintained over the long-term. Hiralall and Martens (1998) used a direct training procedure in conjunction with a script to increase teachers' use of five components of direct instruction, one of which was praise. Results indicated that the increases obtained in the training and training plus script phases deteriorated in the follow-up phase. The current study demonstrated a follow-up level of BSP use at or above the level attained during the DBC phase for all participants.

With regard to the third research question (i.e., Does *in situ* training via a bug-in-the-ear device result in teachers' generalization of BSP use to untrained classrooms?), results indicate that one teacher generalized the increased use of BSP to classes where no training occurred without any prompting or feedback. A brief generalization prompt procedure that involved showing graphed data of teacher use of BSP and student levels of disruptive behavior in both the trained and untrained classes successfully resulted in the remaining three participants increasing their use of BSP in classes where no DBC procedure was implemented. When BSP use was increased and maintained in the untrained classes, levels of student disruptive behavior in those classes typically demonstrated a decreasing trend. Previous studies that have examined the effectiveness of DBC (e.g., Dufrene et al., 2012; Dufrene et al., in press) have failed to evaluate generalization of teacher intervention implementation.

Previous studies that have evaluated the generalization of intervention implementation have employed techniques that are more time consuming and resource

intensive and have failed to result in sustained effects (Duncan, et al., 2013; Riley-Tillman & Eckert, 2001). Although three of the four participants in the current study needed PF to maintain the desired rate of BSP and the same three teachers required a prompt to generalize BSP use to untrained classes at the desired rate, both the PF and GP procedures were simple and brief and provided sustained results. The results of the current study are similar to the results of Martell (2012) in that a brief PF procedure resulted in sustained effect on the level of intervention implementation. However, these results are in contrast to Coffee & Kratochwill (2013), Duncan et al., and Riley-Tillman and Eckert (2001), in which multiple-component consultation practices did not result in significant, maintained use of BSP in the classroom.

This study includes additional contributions to the literature that go beyond the research questions. In particular, this study included the PBIS-SAS, JSS, and CARS as measures of social validity. With regard to the PBIS-SAS, teachers reported that following DBC, there was an increase in students experiencing high rates of academic success, teachers having regular opportunities to access assistance, and efficient and orderly transitions between instructional and non-instructional activities as measured by the classrooms systems index of the PBIS-SAS. With regard to the JSS, two of four teachers' ratings resulted in increases in job satisfaction from a "good" job to a "great" job, while the other two teachers maintained a rating of a "great" job. With regard to the CARS, all teachers rated the consultation process as highly acceptable. Previous teacher training and consultation research (e.g., Dufrene et al., 2012; Dufrene et al., in press) has largely neglected to obtain teachers' perceptions of direct training and PF procedures. Therefore, this study provides preliminary data regarding teachers' perceptions of the

consultation process and how it impacted their perception of implementation of PBIS in the classroom and their overall job satisfaction. Future research should no doubt continue to evaluate the extent to which teachers are accepting of and satisfied with *in situ* direct training procedures, and the extent to which teachers perceive *in situ* direct training procedures as resulting in socially valid outcomes (e.g., greater use of positive behavior supports, greater job satisfaction, and improved student performance).

Limitations

This study includes some limitations that warrant discussion. First, all participants were high school teachers in their first year of teaching and volunteered to participate in this study. As such, they may have been more open to receiving prompts via a bug-in-the-ear device and more accepting of PF and prompting than teachers with more years of experience would be. Previous studies have found that teachers new to the field are more open to change and learning new classroom management techniques (Hargreaves, 2005; Soodak, Podell, & Lehman, 1998). Therefore, future research should examine the impact of *in situ* training for improving high school teachers' BSP with a more diverse group of high school teachers in order to expand the external validity of these findings.

A second limitation of the current study is that for two participants, only one generalization probe was conducted during the baseline observations, giving a limited sample of BSP and student level of disruptive behavior for classes where training did not occur. However, when examined in conjunction with other baseline observations conducted in target and non-target classrooms across participants, it appears that little to no BSP was being demonstrated by participants prior to the DBC procedure. Therefore,

it is likely that the limited sample of BSP in generalization classrooms is a representative sample, as teachers consistently displayed near zero rates of praise prior to DBC.

Third, the DBC *in situ* training included five consecutive sessions of training in the classroom, which may not be feasible for some school-based consultants. Future research should examine whether or not fewer training sessions can result in sustained use of an increased rate of BSP. Finally, while this study included an attempt to measure the social validity of the *in situ* direct training procedure, two of the three social validity measures do not include adequate technical adequacy data. In particular, the JSS and CARS are not supported by reliability and validity data; so, interpretation of social validity findings from the JSS and CARS must be greatly tempered.

Implications for Practice

This study provides preliminary support for the use of *in situ* training with a bug-in-the-ear for improving high school teachers' BSP in trained and untrained classes.

Although these results are preliminary, school-based consultants may be encouraged to test these consultation procedures in their professional practice as results were generally favorable, consistent with previous DBC research, and the teachers in this study rated the consultation procedures as acceptable and beneficial in their classrooms. The following specific recommendations are offered. First, this can be considered a component of a three-tiered consultation model where didactic training is implemented as a Tier I teacher training method. Teachers who fail to consistently and effectively implement effective classroom management techniques following didactic training may benefit from a Tier II level of consultation (e.g., weekly written performance feedback). For teachers needing a higher level of support to implement evidence-based interventions with integrity, a Tier

III consultation technique (e.g., direct *in situ* training) would be used to increase the implementation of effective classroom management strategies.

Second, if this level of consultation is warranted, the consultant should closely monitor the consultees' responses to consultation (i.e., intervention implementation), as well as the consultees' acceptability of the consultation procedures. If consultees respond to consultation by implementing the procedures in trained and untrained classrooms, then periodic follow-up visits may be scheduled to ascertain teachers' desire for additional consultation services. However, if a teacher's implementation in the trained classroom subsequently falters, then a brief meeting with graphed PF can improve implementation to the desired level. Moreover, if generalized intervention use is needed but not produced by initial training, then a simple efficient generalization prompt can be used to encourage and initiate generalized implementation of the intervention.

Conclusion

In conclusion, the current study demonstrated that the use of *in situ* prompts using a bug-in-the-ear device can effectively increase high school teachers' use of BSP in trained classrooms. Additionally, while three teachers displayed decreases in BSP during maintenance, one brief PF session resulted in maintained BSP in the target classroom for those teachers. Moreover, for those three teachers, one brief meeting in which the consultant suggested using BSP in untrained classrooms resulted in increases in BSP in untrained classrooms that maintained at the one-month follow-up. These results are promising, and future research is encouraged to determine the consistency of these findings.

APPENDIX A



INSTITUTIONAL REVIEW BOARD
 118 College Drive #5147 | Hattiesburg, MS 39406-0001
 Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
 Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **13052202**
 PROJECT TITLE: **Direct Training to Increase High School Teachers' Praise Use**
 PROJECT TYPE: **Dissertation**
 RESEARCHER(S): **Traci Taber**
 COLLEGE/DIVISION: **College of Education and Psychology**
 DEPARTMENT: **Psychology**
 FUNDING AGENCY/SPONSOR: **N/A**
 IRB COMMITTEE ACTION: **Exempt Review Approval**
 PERIOD OF APPROVAL: **05/30/2013 to 05/29/2014**

Lawrence A. Hosman, Ph.D.
Institutional Review Board

APPENDIX B

TEACHER CONSENT FORM
University of Southern Mississippi

Dear Teacher,

You have been invited to participate in a study to help improve overall class behavior during a specific class period. Provided that your class qualifies for this study, you will be trained to improve your use of classroom management techniques. The training procedure will be conducted using a bug-in-the-ear device to deliver prompts and help you implement effective behavior management strategies in the classroom. The training procedure using the bug-in-the ear device will be conducted for 5 sessions. Observations of student behavior will be conducted for 5 classes before the training procedure is implemented, during the training procedure, and for 5 classes after the training procedure has been completed. The observations will be 20 minutes in length, and will be conducted 3-5 times per week for approximately 6 weeks.

Benefits for participating in this research may include: (a) improvements in student behavior performance and (b) you may acquire new skills to implement evidence-based behavior management techniques. Minimal risks are associated with participation in this study. You may experience some mild discomfort as a result of being prompted. The primary investigator is a Nationally Certified School Psychologist and will be available for further consultation to ameliorate any issues that may occur as a result of the training procedure. Participation is voluntary and you may withdraw at any time without penalty, prejudice, or loss of benefits.

All information obtained during the course of the study will be kept confidential; names, identifying information, and data recordings will only be available to persons involved in this study. Results from this study may be shared at professional conferences or published in scholarly journals, but all identifying information will be removed. Data collection sheets will be maintained in a secure area for five years. After five years, data will be destroyed.

Whereas it is impossible to predict the results of this study, the primary investigator will take all necessary steps to ensure that the study is implemented with the best scientific practice. If you agree to participate in this study, please read, sign, and return the following page. Please keep this letter for your records. If you have any questions about this study, please contact Traci Taber (601.266.5255; Traci.Taber@eagles.usm.edu) or Dr. Brad Dufrene (601.266.5255; brad.dufrene@usm.edu).

This project and this consent have been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the Institutional Review Board Office, the University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406-5147; (601) 266-6820.

Sincerely,

Traci Taber, M.S.
School Psychology doctoral student

Brad A. Dufrene, Ph.D.
Supervising Licensed Psychologist

THIS SECTION TO BE COMPLETED BY THE TEACHER

Please read and sign the following:

I have read the above documentation and consent to participate in this project. I have had the purpose and procedures of this study explained to me and have had the opportunity to ask questions. My questions have been answered to my satisfaction, and I am voluntarily signing this form to participate under the conditions stated. I have also received a copy of this consent. I further understand that all data collected in this study will be confidential and that names will not be associated with any data collected. I understand that I may withdraw my consent for participation at any time without penalty, prejudice, or loss of privilege.

Signature of Teacher

Date

Signature of Witness

APPENDIX C

(PBIS) Self Assessment Survey
Assessing and Planning Behavior Support in Schools

Name of school _____ Date _____

District _____

Person Completing the Survey:

☐ Administrator
 ☐ Special Educator
 ☐ Parent/Family member
☐ General Educator
 ☐ Counselor
 ☐ School Psychologist
☐ Educational/Teacher Assistant
 ☐ Community member
 ☐ Other _____

1. Complete the survey independently.
2. Schedule 20-30 minutes to complete the survey.
3. Base your rating on your individual experiences in the school. If you do not work in classrooms, answer questions that are applicable to you.

To assess behavior support, first evaluate the status of each system feature (i.e. *in place*, *partially in place*, *not in place*) (left hand side of survey). Next, examine each feature:

- a. “What is the current status of this feature (i.e. *in place*, *partially in place*, *not in place*)?”
 - b. For those features rated as partially in place or not in place, “What is the priority for improvement for this feature (i.e., *high*, *medium*, *low*)?”
4. Return your completed survey to _____

SCHOOL-WIDE SYSTEMS

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	School-wide is defined as involving all students, all staff, & all settings.	High	Med	Low
			1. A small number (e.g. 3-5) of positively & clearly stated student expectations or rules are defined.			
			2. Expected student behaviors are taught directly.			
			3. Expected student behaviors are rewarded regularly.			
			4. Problem behaviors (failure to meet expected student behaviors) are defined clearly.			
			5. Consequences for problem behaviors are defined clearly.			
			6. Distinctions between office v. classroom managed problem behaviors are clear.			
			7. Options exist to allow classroom instruction to continue when problem behavior occurs.			
			8. Procedures are in place to address emergency/dangerous situations.			
			9. A team exists for behavior support planning & problem solving.			
			10. School administrator is an active participant on the behavior support team.			
			11. Data on problem behavior patterns are collected and summarized within an on-going system.			
			12. Patterns of student problem behavior are reported to teams and faculty for active decision-making on a regular basis (e.g. monthly).			
			13. School has formal strategies for informing families about expected			

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	School-wide is defined as involving all students, all staff, & all settings.	High	Med	Low
			student behaviors at school.			
			14. Booster training activities for students are developed, modified, & conducted based on school data.			
			15. School-wide behavior support team has a budget for (a) teaching students, (b) on-going rewards, and (c) annual staff planning.			
			16. All staff are involved directly and/or indirectly in school-wide interventions.			
			17. The school team has access to on-going training and support from district personnel.			
			18. The school is required by the district to report on the social climate, discipline level or student behavior at least annually.			

Name of School _____ Date _____

NONCLASSROOM SETTING SYSTEMS

Current Status			Feature	Priority for		
In Place	Partial in Place	Not in Place	Non-classroom settings are defined as particular times or places where supervision is emphasized (e.g., hallways, cafeteria, playground, bus).	High	Med	Low
			1. School-wide expected student behaviors apply to non-classroom settings.			
			2. School-wide expected student behaviors are taught in non-classroom settings.			
			3. Supervisors actively supervise (move, scan, & interact) students in non-classroom settings.			
			4. Rewards exist for meeting expected student behaviors in non-classroom settings.			
			5. Physical/architectural features are modified to limit (a) unsupervised settings, (b) unclear traffic patterns, and (c) inappropriate access to & exit from school grounds.			
			6. Scheduling of student movement ensures appropriate numbers of students in non-classroom spaces.			
			7. Staff receives regular opportunities for developing and improving active supervision skills.			
			8. Status of student behavior and management practices are evaluated quarterly from data.			
			9. All staff are involved directly or indirectly in management of non-classroom settings.			

Name of School _____ Date _____

CLASSROOM SYSTEMS

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	Classroom settings are defined as instructional settings in which teacher(s) supervise & teach groups of students.	High	Med	Low
			1. Expected student behavior & routines in classrooms are stated positively & defined clearly.			
			2. Problem behaviors are defined clearly.			
			3. Expected student behavior & routines in classrooms are taught directly.			
			4. Expected student behaviors are acknowledged regularly (positively reinforced) (>4 positives to 1 negative).			
			5. Problem behaviors receive consistent consequences.			
			6. Procedures for expected & problem behaviors are consistent with school-wide procedures.			
			7. Classroom-based options exist to allow classroom instruction to continue when problem behavior occurs.			
			8. Instruction & curriculum materials are matched to student ability (math, reading, language).			
			9. Students experience high rates of academic success ($\geq 75\%$ correct).			
			10. Teachers have regular opportunities for access to assistance & recommendations (observation, instruction, & coaching).			
			11. Transitions between instructional & non-instructional activities are efficient & orderly.			

INDIVIDUAL STUDENT SYSTEMS

Current Status			Feature	Priority for Improvement		
In Place	Partial in Place	Not in Place	Individual student systems are defined as specific supports for students who engage in chronic problem behaviors (1%-7% of enrollment)	High	Med	Low
			1. Assessments are conducted regularly to identify students with chronic problem behaviors.			
			2. A simple process exists for teachers to request assistance.			
			3. A behavior support team responds promptly (within 2 working days) to students who present chronic problem behaviors.			
			4. Behavioral support team includes an individual skilled at conducting functional behavioral assessment.			
			5. Local resources are used to conduct functional assessment-based behavior support planning (~10 hrs/week/student).			
			6. Significant family &/or community members are involved when appropriate & possible.			
			7. School includes formal opportunities for families to receive training on behavioral support/positive parenting strategies.			
			8. Behavior is monitored & feedback provided regularly to the behavior support team & relevant staff.			

Name of School _____

Date _____

APPENDIX D

JOB SATISFACTION SURVEY

	YES	NO
1. I look forward to going to work on Monday morning.	<input type="checkbox"/>	<input type="checkbox"/>
2. I feel positive and up most of the time I am working.	<input type="checkbox"/>	<input type="checkbox"/>
3. I have energy at the end of each work day to attend to the people I care about.	<input type="checkbox"/>	<input type="checkbox"/>
4. I have energy at the end of each work day to engage in personal interests.	<input type="checkbox"/>	<input type="checkbox"/>
5. I have the time and energy in my life to read books that interest me.	<input type="checkbox"/>	<input type="checkbox"/>
6. Most interactions at work are positive.	<input type="checkbox"/>	<input type="checkbox"/>
7. I have good friends at work.	<input type="checkbox"/>	<input type="checkbox"/>
8. I feel valued and affirmed at work.	<input type="checkbox"/>	<input type="checkbox"/>
9. I feel recognized and appreciated at work.	<input type="checkbox"/>	<input type="checkbox"/>
10. Work is a real plus in my life.	<input type="checkbox"/>	<input type="checkbox"/>
11. I'm engaged in meaningful work.	<input type="checkbox"/>	<input type="checkbox"/>
12. I feel free to be who I am at work.	<input type="checkbox"/>	<input type="checkbox"/>
13. I feel free to do things the way I like at work.	<input type="checkbox"/>	<input type="checkbox"/>
14. My values fit with the organizational values.	<input type="checkbox"/>	<input type="checkbox"/>
15. I am aligned with the organizational mission.	<input type="checkbox"/>	<input type="checkbox"/>
16. I trust our leadership team.	<input type="checkbox"/>	<input type="checkbox"/>
17. I respect the work of my peers.	<input type="checkbox"/>	<input type="checkbox"/>
18. I have opportunities to learn what I want to learn.	<input type="checkbox"/>	<input type="checkbox"/>
19. I feel involved in decisions that affect our organizational community.	<input type="checkbox"/>	<input type="checkbox"/>
20. Creativity and innovation are supported.	<input type="checkbox"/>	<input type="checkbox"/>
21. I feel informed about what's going on.	<input type="checkbox"/>	<input type="checkbox"/>
22. I know what is expected of me at work.	<input type="checkbox"/>	<input type="checkbox"/>
23. I have the materials and equipment that I need in order to do my work right.	<input type="checkbox"/>	<input type="checkbox"/>
24. I have the opportunity to do what I do best every day at work.	<input type="checkbox"/>	<input type="checkbox"/>
25. My manager cares about me as a person.	<input type="checkbox"/>	<input type="checkbox"/>
26. I know someone at work who encourages my development.	<input type="checkbox"/>	<input type="checkbox"/>
27. My opinions count.	<input type="checkbox"/>	<input type="checkbox"/>
28. My coworkers are committed to doing quality work.	<input type="checkbox"/>	<input type="checkbox"/>
29. My manager reviews my progress.	<input type="checkbox"/>	<input type="checkbox"/>
30. I am fairly compensated.	<input type="checkbox"/>	<input type="checkbox"/>

Give yourself two points for each statement you answered positively. Use the following scale to evaluate your job.

50-60 points: Great Job

40-49 points: Good Job

30-39 points: OK Job

20-29 points: Bad Job

1-19 points: Depressing Job



APPENDIX E

CONSULTATION ACCEPTABILITY RATING SCALE

	Strongly Disagree			Strongly Agree		
1. The consultant seemed knowledgeable about effective classroom practices.	0	1	2	3	4	5
2. The consultant effectively answered my	0	1	2	3	4	5
3. The consultant provided recommendations that were appropriate given the concerns about the student/class.	0	1	2	3	4	5
4. The consultant clearly explained the assessment and/or intervention procedures.	0	1	2	3	4	5
5. The consultant effectively taught me how to implement their recommendations.	0	1	2	3	4	5
6. The consultant provided me with the resources to implement their	0	1	2	3	4	5
7. The consultation process seemed appropriate given the severity of the student's/class's referral concern.	0	1	2	3	4	5
8. The consultation process did NOT significantly interfere with classroom	0	1	2	3	4	5
9. The consultation process was completed in a timely fashion.	0	1	2	3	4	5
10. The referred student/class benefited from the consultation process.	0	1	2	3	4	5
11. I would like to work with this consultant again in the future.	0	1	2	3	4	5
12. Other teachers would benefit from working with this consultant.	0	1	2	3	4	5

APPENDIX F
OBSERVATION FORM

Int	BSP	DB	Int	BSP	DB	Int	BSP	DB	Int	BSP	DB
1.1			6.1			11.1			16.1		
1.2			6.2			11.2			16.2		
1.3			6.3			11.3			16.3		
1.4			6.4			11.4			16.4		
1.5			6.5			11.5			16.5		
1.6			6.6			11.6			16.6		
2.1			7.1			12.1			17.1		
2.2			7.2			12.2			17.2		
2.3			7.3			12.3			17.3		
2.4			7.4			12.4			17.4		
2.5			7.5			12.5			17.5		
2.6			7.6			12.6			17.6		
3.1			8.1			13.1			18.1		
3.2			8.2			13.2			18.2		
3.3			8.3			13.3			18.3		
3.4			8.4			13.4			18.4		
3.5			8.5			13.5			18.5		
3.6			8.6			13.6			18.6		
4.1			9.1			14.1			19.1		
4.2			9.2			14.2			19.2		
4.3			9.3			14.3			19.3		
4.4			9.4			14.4			19.4		
4.5			9.5			14.5			19.5		
4.6			9.6			14.6			19.6		
5.1			10.1			15.1			20.1		
5.2			10.2			15.2			20.2		
5.3			10.3			15.3			20.3		
5.4			10.4			15.4			20.4		
5.5			10.5			15.5			20.5		
5.6			10.6			15.6			20.6		
Date				Period/ Time				BSP Rate			
Teacher				Obs. Initials				% DB			

APPENDIX G

PROCEDURAL INTEGRITY FOR BASELINE

Teacher: _____

Date: _____

Observer: _____

Class Period: _____

	Steps	Yes	No
1	Observers sat in a nonobtrusive location in the classroom.		
2	No instructions, prompts, or feedback were provided to the teacher.		

	Number of steps completed:	/2
	Percentage of steps completed:	

APPENDIX H

PROCEDURAL INTEGRITY FOR DBC PHASE

Teacher: _____

Date: _____

Observer: _____

Class Period: _____

	Steps	Yes	No
1	Observers sat in a nonobtrusive location in the classroom.		
2	Researcher provided BSP prompts every 2 minutes, unless the interval was reset because the teacher independently emitted an appropriate BSP.		
3	Teacher delivered BSP every 2 minutes.		
4	BSP statements clearly described a behavior being exhibited by a student.		
	Number of steps completed:	/4	
	Percentage of steps completed:		

APPENDIX I

PROCEDURAL INTEGRITY FOR MAINTENANCE AND FOLLOW-UP

Teacher: _____

Date: _____

Observer: _____

Class Period: _____

	Steps	Yes	No
1	Observers sat in a nonobtrusive location in the classroom.		
2	Teacher was not provided with instructions, prompts, or feedback.		

	Number of steps completed:	/2
	Percentage of steps completed:	

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